



**CONESTOGA-ROVERS
& ASSOCIATES**

651 Colby Drive, Waterloo, Ontario, N2V 1C2
Telephone: (519) 884-0510 Fax: (519) 884-0525
www.CRAworld.com

November 27, 2014

Reference No. 039611

Mr. Rosauero del Rosario
EPA Project Manager/Coordinator
United States Environmental Protection Agency (USEPA)
Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Dear Mr. del Rosario:

Re: 2014 Annual Groundwater Monitoring Report
Himco Site, Elkhart, Indiana (Site)

US EPA RECORDS CENTER REGION 5



577100

Please find attached the 2014 Annual Groundwater Monitoring Report for the Himco Site. Conestoga-Rovers & Associates (CRA) has prepared this submittal on behalf of the Himco Site Trust for your review and approval. An electronic copy of the report is also provided for your use.

Should you have any questions, please contact me at (519) 884-0510.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Alan W. Van Norman, P. Eng.

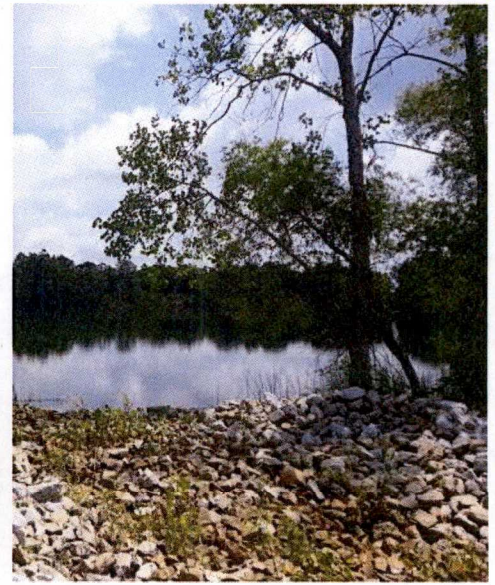
HS/mg/51
Encl.

cc: Doug Petroff, IDEM (two copies)
Christopher Fassero, USACE (three copies)
Gary Toczylowski, Bayer HealthCare
Tom Lenz, Bayer HealthCare
Alan Deal, CRA (electronic)



**CONESTOGA-ROVERS
& ASSOCIATES**

www.CRAworld.com



Report

2014 Annual Groundwater Monitoring Report

Himco Site
Elkhart, Indiana

Prepared for: Himco Site Trust

Conestoga-Rovers & Associates

651 Colby Drive
Waterloo, Ontario N2V 1C2

November 2014 • 39611 • Report No. 37



Table of Contents

	Page
Section 1.0 Introduction.....	1
1.1 Purpose	1
1.2 Background	1
1.3 Previous Investigative Activities	2
1.3.1 Groundwater Investigations.....	2
1.3.2 Routine Groundwater Monitoring	3
1.4 Report Organization.....	4
Section 2.0 Groundwater Monitoring Program Scope	5
2.1 Groundwater Elevation Monitoring.....	5
2.2 Groundwater Quality Monitoring.....	5
Section 3.0 Hydrogeology.....	6
3.1 Site Hydrogeology	6
3.2 Groundwater Elevation Monitoring.....	6
Section 4.0 Groundwater Quality Monitoring	7
4.1 Introduction	7
4.2 Volatile Organic Compounds (VOCs)	9
4.2.1 Benzene	10
4.2.2 1,1-Dichloroethane (1,1-DCA)	12
4.2.3 cis-1,2-Dichloroethene (cis-1,2-DCE).....	14
4.2.4 Vinyl Chloride	15
4.2.5 Carbon Disulfide	16
4.3 Semi-Volatile Organic Compounds (SVOCs)	17
4.4 Metals and General Chemistry Analytes	18
4.4.1 Introduction.....	18
4.4.2 Arsenic.....	20
4.4.3 Calcium	20
4.4.4 Lead	21
4.4.5 Iron	22
4.4.6 Manganese	22
4.4.7 Sodium.....	23
4.4.8 Chloride	24
Section 5.0 Conclusions and Recommendations.....	24
5.1 Groundwater Elevation Monitoring.....	24
5.2 Groundwater Quality Monitoring.....	25
5.2.1 VOCs	25

Table of Contents

	Page
5.2.2 SVOCs	25
5.2.3 Metals and General Chemistry Parameters	26
5.3 Future Monitoring and Reporting.....	27

List of Figures (Following Text)

Figure 1.1	Site Location Map
Figure 1.2	Site Plan
Figure 2.1	Groundwater Monitoring Program – 2013 Annual Groundwater Monitoring Report
Figure 3.1	Schematic Cross-Section
Figure 3.2	Groundwater Elevation Contours – Upper Aquifer – September 23, 2013
Figure 3.3	Groundwater Elevation Contours – Intermediate Aquifer– September 23, 2013
Figure 3.4	Groundwater Elevation Contours – Lower Aquifer– September 23, 2013
Figure 3.5	Vertical Hydraulic Gradients – September 23, 2013
Figure 4.1	Benzene Concentration Contours – September 2013 to April 2014 – Upper Aquifer
Figure 4.2	1,1-DCA Concentrations – September 2013 to April 2014 – Upper Aquifer
Figure 4.3	1,1-DCA Concentrations – September 2013 to April 2014 – Intermediate Aquifer
Figure 4.4	Cis-1,2-DCE Concentrations – September 2013 to April 2014 – Upper Aquifer
Figure 4.5	Cis-1,2-DCE Concentrations – September 2013 to April 2014 – Intermediate Aquifer
Figure 4.6	Vinyl Chloride Concentrations – September 2013 to April 2014– Upper Aquifer
Figure 4.7	Vinyl Chloride Concentrations – September 2013 to April 2014– Intermediate Aquifer
Figure 4.8	Vinyl Chloride Concentrations – September 2013 to April 2014 - Lower Aquifer

List of Figures (Following Text)

Figure 4.9	Carbon Disulfide Concentrations – September 2013 to April 2014 - Upper Aquifer
Figure 4.10	Carbon Disulfide Concentrations – September 2013 to April 2014 – Intermediate Aquifer
Figure 4.11	Carbon Disulfide Concentrations – September 2013 to April 2014 - Lower Aquifer
Figure 4.12	Arsenic Concentration Contours – September 2013 to April 2014 – Intermediate Aquifer
Figure 4.13	Arsenic Concentration Contours – September 2013 to April 2014 – Lower Aquifer
Figure 4.14	Calcium Concentration Contours – September 2013 to April 2014 – Upper Aquifer
Figure 4.15	Lead Concentration Contours – September 2013 to April 2014 – Upper Aquifer
Figure 4.16	Iron Concentration Contours – September 2013 to April 2014 – Upper Aquifer
Figure 4.17	Manganese Concentration Contours – September 2013 to April 2014 – Upper Aquifer
Figure 4.18	Sodium Concentration Contours – September 2013 to April 2014 – Upper Aquifer
Figure 4.19	Chloride Concentration Contours – September 2013 to April 2014 – Upper Aquifer

List of Tables (Following Text)

Table 2.1	Monitoring Well Status
Table 2.2	Groundwater Monitoring Program
Table 2.3	Groundwater Monitoring Program Parameter List
Table 4.1	Groundwater Analytical Results Summary – VOCs & SVOCs
Table 4.2	Groundwater Analytical Results Summary – Metals - Upper Aquifer
Table 4.3	Groundwater Analytical Results Summary – Metals - Intermediate Aquifer
Table 4.4	Groundwater Analytical Results Summary – Metals - Lower Aquifer

List of Appendices

- Appendix A E:DAT (Electronic Data Access Tool)
- Appendix B Table of Analytical Results
- Appendix C Laboratory Reports and Data Validation Memoranda
- Appendix D Groundwater Sampling Stabilization Parameters

List of Acronyms

1,1-DCA	1,1-Dichloroethane
BV	Background Value
CD	Consent Decree
CDA	Construction Debris Area
CoC	Contaminants of Concern
CRA	Conestoga-Rovers & Associates
e:DAT	electronic data access tool
ft AMSL	feet Above Mean Sea Level
GMP	Groundwater Monitoring Program
GW RAO	Groundwater Remedial Action Objective
IDEM	Indiana Department of Environmental Management
J	Value is estimated
mg/L	milligram per litre
NPL	National Priority List
PSDs	Performing Settling Defendants
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
Report	2014 Annual Groundwater Monitoring Report
RD	Remedial Design
RDA	Recommended Dietary Allowance
RDL	Reporting Detection Limit
RD/RA	Remedial Design/Remedial Action
RD Work Plan	Remedial Design Work Plan
RSL	Tapwater Regional Screening Level
S4	Fourth Semi-Annual GMP Event
S5	Fifth Semi-Annual GMP Event
Site	Himco Site
SOW	Statement of Work
SVOC	Semi Volatile Organic Compound
TCE	Trichloroethene
U	Not detected greater than the associated value
µg/L	microgram per litre
USEPA	United States Environmental Protection Agency
VAS	Vertical Aquifer Sampling
VOC	Volatile Organic Compounds

Section 1.0 Introduction

1.1 Purpose

This 2014 Annual Groundwater Monitoring Report (Report) presents the results of routine groundwater monitoring completed in 2013 and 2014 at the Himco Site (Site), located in Elkhart, Indiana. Conestoga-Rovers & Associates (CRA) has prepared this report on behalf of the Performing Settling Defendants (PSDs), collectively known as the Himco Site Trust.

The Himco Site is a National Priorities List (NPL) site that is being remediated pursuant to a Consent Decree (Civil Action No. 2:07cv304 (TS)) (CD). The Statement of Work (SOW), included as Appendix B of the CD, specified the Remedial Action (RA) requirements for the Site. The SOW required groundwater investigations to the east and southeast of the Site and the implementation of a Groundwater Monitoring Program (GMP). CRA prepared a Remedial Design Work Plan (RD Work Plan) on behalf of the PSDs that combined the East and Southeast Groundwater Investigations and the GMP into a three-phase groundwater investigation that built incrementally to address the groundwater investigation and monitoring requirements of the SOW.

CRA completed quarterly groundwater monitoring between 2008 and 2011. CRA documented the results of previous monitoring rounds in a series of reports previously submitted to the United States Environmental Protection Agency (USEPA) and the Indiana Department of Environmental Management (IDEM). In accordance with the Interim Groundwater Monitoring Program Report (CRA, 2011), approved by USEPA on August 31, 2011, the GMP currently includes semi-annual groundwater monitoring with annual reporting each fall.

1.2 Background

The Site is a closed landfill located at the intersection of County Road 10 and John Weaver Parkway (formerly Nappanee Street Extension) in Cleveland Township, Elkhart County, Indiana. The Site is approximately 60 acres in size, and accepted waste such as household refuse, construction rubble, medical waste, and calcium sulfate between 1960 and 1976. The landfill was closed in 1976.

The Site was proposed for the NPL in 1988 and was placed on the NPL in 1990. The Remedial Design/Remedial Action (RD/RA) is being conducted pursuant to the CD, which became effective on November 27, 2007. The lead Agency for the Site is the USEPA Region 5. IDEM is the support Agency.

Figure 1.1 shows the Site location. Figure 1.2 shows the layout of the Site, including property boundaries. The Site consists of two major areas: the landfill, and the 4-acre construction

debris area (CDA), located on the northern portion of seven residential properties and one commercial property that front onto County Road 10. In 2011, the PSDs relocated CDA waste to the landfill, and completed the construction of a soil cover over the landfill in 2012. USEPA approved the Construction Completion Report/Completion of Remedial Action Report (CRA, 2012) on October 31, 2012.

1.3 Previous Investigative Activities

1.3.1 Groundwater Investigations

Section II, Paragraph 4.3 of the SOW describes the requirements for the groundwater investigation east and southeast of the Site. The purpose of the investigation was to delineate the contaminant plume emanating from the Site that may potentially be impacting the adjacent aquifer and water supply wells.

CRA completed the Phase I Groundwater Investigation in 2008 and 2009. The Phase I Groundwater Investigation consisted of:

- Historic data compilation
- Existing monitoring well reconnaissance and survey
- Baseline groundwater monitoring
- Phase I vertical aquifer sampling (VAS)
- The Interim Groundwater Monitoring Program

CRA submitted the Phase I Groundwater Investigation Report to the USEPA in May 2009. USEPA provided comments on the Phase I Groundwater Investigation Report in a letter dated August 12, 2009. CRA responded to these comments in a letter dated October 20, 2009 and USEPA approved the recommendations for the Phase II Groundwater Investigation in a letter dated December 23, 2009.

The Phase II Groundwater Investigation consisted of the following tasks:

- Additional VAS
- New monitoring well installation

The results of the Phase II Groundwater Investigation refined the horizontal and vertical delineation of impacted groundwater in the vicinity of the Site and improved the definition of background groundwater quality. The Himco Site Trust completed the Phase II Groundwater Investigation in May and June 2010. CRA submitted the Phase II Groundwater Investigation

Report to the USEPA in October 2010. USEPA provided comments on the Phase II Groundwater Investigation Report in a letter dated January 25, 2011. CRA responded to these comments in a letter dated February 23, 2011.

CRA submitted the Interim Groundwater Monitoring Program Report to USEPA in May 2011. The Interim Groundwater Monitoring Program Report summarized the results of the Interim Groundwater Monitoring Program after two years of sampling (eight quarterly events), and provided recommendations for the scope and frequency of future groundwater monitoring to be included in the GMP. USEPA provided comments on the Interim Groundwater Monitoring Program Report in a letter dated June 23, 2011 and CRA responded to these comments in a letter dated August 12, 2011. USEPA approved the revised Interim Groundwater Monitoring Program Report in a letter dated August 31, 2011.

The Phase III Groundwater Investigation consisted of installing new monitoring wells that completed the monitoring well network. The Himco Site Trust completed the Phase III Groundwater Investigation in February and March 2011. CRA submitted the Phase III Groundwater Investigation Report to the USEPA in July 2011. USEPA provided comments on the Phase III Groundwater Investigation in a letter dated May 10, 2012 and CRA responded to these comments in a letter dated June 8, 2012. USEPA approved the Phase III Groundwater Investigation Report in a letter dated June 20, 2012.

1.3.2 Routine Groundwater Monitoring

CRA completed a Baseline Groundwater Sampling round in October and November 2008. The purpose of this sampling was to determine if the monitoring wells were capable of providing representative groundwater samples and to establish baseline groundwater quality conditions. The Baseline Groundwater Sampling round represents the first routine quarterly groundwater quality monitoring round (Q1).

CRA completed the initial round of the Interim Groundwater Monitoring Program in February 2009. The Interim Groundwater Monitoring Program was completed on a quarterly basis between November 2008 and June 2011. CRA provided the results of the Interim Groundwater Monitoring Program to the USEPA in the following submissions:

- Q1 and Q2 - The Phase I Groundwater Investigation Report (CRA, May 2009)
- Q3 through Q6 - Himco Annual Groundwater Monitoring Report (CRA, July 2010)
- Q7 - The Phase II Groundwater Investigation Report (CRA, October 2010)
- Q8 - Interim Groundwater Monitoring Program Report (CRA, April 2011)

- Q9 through Q11 – 2011 Annual Groundwater Monitoring Report (CRA, November 2011)
- Q12 and Q13 – 2012 Annual Groundwater Monitoring Report (CRA, November 2012)

CRA completed the initial round of the semi-annual GMP (S1) from April 23 to April 26, 2012. The results of the S1 monitoring were provided in 2012 Annual Groundwater Monitoring Report (CRA, November 2012).

CRA completed the second round of the semi-annual GMP (S2) from September 17 to October 20, 2012. CRA completed the third round of the semi-annual GMP (S3) from April 23 to April 24, 2013. Some of the S3 groundwater samples were lost while being shipped to the lab. CRA collected groundwater samples from selected monitoring wells WT102A, WT102B, WT116A, WT120C, WT121A, and WT121B for semi-volatile compound (SVOCs) analysis in May 2013. The results of the S2 and S3 monitoring are provided in 2013 Annual Groundwater Monitoring Report (CRA, November 2013).

CRA completed the fourth and fifth rounds of the semi-annual GMP (S4 and S5) from September 23 to 27, 2013 and April 21 to 24, 2014, respectively. The results of the S4 and S5 monitoring rounds are provided in this report. Subsequent sampling events will be discussed in future reports.

CRA also evaluated trends in the groundwater quality data and calculated background concentrations for metals and general chemistry parameters. The Himco Annual Groundwater Monitoring Report (CRA, 2010) includes statistical evaluations of the trends in groundwater quality data based on Q1 through Q6 results.

CRA has uploaded the Himco environmental monitoring database into an in-house software tool called e:DAT (electronic data access tool). The e:DAT for this Site can also be used to access aerial imagery and stratigraphic logs. Appendix A includes a copy of the e:DAT.

1.4 Report Organization

This report is organized as follows:

- Section 2.0 Describes the scope of the routine groundwater monitoring activities completed at the Site
- Section 3.0 Describes the Site conceptual hydrogeologic model and the groundwater flow regime, and presents hydraulic monitoring data

- Section 4.0 Discusses groundwater quality monitoring results
- Section 5.0 Presents conclusions, recommendations and future routine groundwater monitoring activities

Section 2.0 Groundwater Monitoring Program Scope

2.1 Groundwater Elevation Monitoring

During this reporting period, CRA completed semi-annual groundwater elevation monitoring on September 23, 2013 (S4), and April 21, 2014 (S5). Data collected prior to September 2013 are discussed in previous reports. Section 3.0 provides the results of the groundwater elevation monitoring.

2.2 Groundwater Quality Monitoring

Table 2.1 summarizes the status and construction details of the monitoring wells installed in the vicinity of the Site since 1990. Table 2.2 lists the monitoring wells included in the Groundwater Monitoring Program and Figure 2.1 shows their locations.

During this reporting period, CRA sampled the wells listed in Table 2.2 in September 2013 (S4), and April 2014 (S5) in accordance with recommendations provided in the 2012 Annual Monitoring report (CRA, November 2013) and approved in a letter from USEPA dated June 14, 2013¹. Table 2.3 provides the groundwater monitoring parameter list for the Groundwater Monitoring Program. TestAmerica Laboratories Inc. of North Canton, Ohio analyzed the groundwater samples. Analytical results are compiled in Appendix B. Laboratory reports and data validation memoranda are provided in Appendix C. CRA validated the groundwater analytical data in accordance with the Quality Assurance Project Plan (QAPP) included in the RD Work Plan (CRA, November 2008). Stabilization parameters measured during groundwater sampling are summarized in Appendix D.

¹ USEPA sent an approval letter for the 2012 Annual Monitoring Report to the Himco Site Trust on June 14, 2013; however, the letter was dated as June 14, 2014.

Section 3.0 Hydrogeology

3.1 Site Hydrogeology

Figure 3.1 provides a schematic of the Site conceptual hydrogeological model. There are five principal hydrostratigraphic units beneath the Site. They are, in descending order:

- The Upper Aquifer
- The Intermediate Aquifer
- The Unnamed Silt/Clay Layer
- The Lower Aquifer
- The Bedrock

CRA conceptualizes the Upper and Intermediate Aquifers beneath the Site as one sand aquifer with silt/clay aquitard materials occasionally interspersed. The Intermediate Aquifer is generally more fine-grained than the overlying Upper Aquifer and it contains discontinuous zones of silt and clay.

The Unnamed Silt/Clay Layer underlies the Intermediate Aquifer. It does not behave as a confining layer.

The sand and gravel Lower Aquifer is beneath the Unnamed Silt Clay layer. The elevation of the Bedrock surface beneath the Site is variable, and therefore, so is the thickness of the Lower Aquifer, but it ranges up to 300 feet thick in the bedrock valley beneath the western portion of the Site.

3.2 Groundwater Elevation Monitoring

CRA has completed two groundwater elevation monitoring rounds during this reporting period. The two monitoring rounds were completed on September 23, 2013 (S4) and April 21, 2014 (S5).

CRA has selected the September 23, 2013 monitoring round for discussion purposes due to the similarity in the groundwater flow pattern during the two monitoring rounds.

Figure 3.2, Figure 3.3, and Figure 3.4 present groundwater elevation contours derived from groundwater elevation data collected on September 23, 2013 for the Upper Aquifer, Intermediate Aquifer and Lower Aquifer, respectively. The depth to groundwater in the vicinity of the Site is relatively shallow, ranging from less than 10 feet to 25 feet with typical depths

ranging from 10 to 15 feet. The elevation of groundwater in the vicinity of the Site ranges from 760 to 747 feet above mean sea level (AMSL).

Figure 3.2 shows that groundwater in the Upper Aquifer typically flows in a southerly direction. Overall groundwater flow is to the south, consistent with the regional groundwater flow pattern. Superimposed on the regional flow are local features, such as the southwest flow near monitoring wells WT111A and WT119B. The horizontal hydraulic gradient across the Site ranged from 0.0009 to 0.002 feet/feet in the Upper Aquifer in September 2013.

As shown on Figure 3.3, groundwater in the Intermediate Aquifer typically flowed in a southerly direction in September 2013, consistent with the regional groundwater flow pattern. East and southeast of the southeast corner of the Site, groundwater in the Intermediate Aquifer flows south. The horizontal hydraulic gradient in the Intermediate Aquifer ranged from 0.0008 to 0.0017 feet/feet in September 2013.

Figure 3.4 presents the results from the September 23, 2013 groundwater elevation monitoring for the Lower Aquifer. These data indicate a south-southeasterly groundwater flow direction in the Lower Aquifer, consistent with the regional groundwater flow pattern. The horizontal hydraulic gradient in the Lower Aquifer ranged from 0.0008 feet/feet to 0.0.07 feet/feet in September 2013. There is a sharp increase in the horizontal hydraulic gradient in the Lower Aquifer between the wells in the southeast corner of the Site and WT106C, located south of the southeast corner of the Site. WT101C and WTE3 were installed near the top of the Lower Aquifer (approximately 590 feet AMSL) in a sequence of silt and sand interbeds. This sequence of interbedded sands and silts is absent at WT106C and instead there is a 40-foot thick layer of silt. The top of the Lower Aquifer is much lower at WT106C (approximately 570 feet AMSL) and WT106C was also installed deeper, at approximately 550 feet AMSL.

Figure 3.5 presents the vertical gradients between the hydrostratigraphic units as measured on September 23, 2013. Upward and downward gradients are present across all units on the Site, ranging from approximately -0.0541 feet/feet to 0.0189 feet/feet.

Section 4.0 Groundwater Quality Monitoring

4.1 Introduction

This section of the Report describes the groundwater quality in the vicinity of the Site and discusses the nature and extent of groundwater contamination emanating from the Site.

This Report presents groundwater quality monitoring data for two semi-annual monitoring and sampling events, the S4 and the S5 rounds of the Groundwater Monitoring Program were completed in September 2013 and April 2014, respectively.

In a letter dated August 31, 2011, USEPA approved the following analytes for routine groundwater quality monitoring at the Site:

Volatile Organic Compounds (VOCs)

- Benzene
- 1,1-Dichloroethane (1,1-DCA)
- cis-1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl chloride
- Carbon disulfide

Semi-volatile Organic Compounds (SVOCs)

- Bis(2-ethylhexyl)phthalate

Metals

- Aluminum
- Arsenic
- Barium
- Beryllium
- Calcium
- Iron
- Lead
- Manganese
- Mercury
- Sodium

General Chemistry

- Sulfate
- Chloride

The following sections discuss the results of the S4 and S5 Groundwater Monitoring Program rounds.

4.2 Volatile Organic Compounds (VOCs)

CRA collected 58 groundwater samples from 27 monitoring wells in September 2013 and April 2014, and analyzed them for VOCs. Table 4.1 summarizes the VOCs detected in groundwater samples collected in September 2013 and April 2014.

Benzene was the only VOC detected in routine groundwater monitoring samples at concentrations greater than its Primary Maximum Contaminant Level (MCL) (5 micrograms per liter [$\mu\text{g/L}$]). The five VOCs in the GMP parameter list were detected at the following frequencies:

- Benzene = 22.4 percent
- 1,1-DCA = 46.6 percent
- cis-1,2-DCE = 36.2 percent
- Vinyl chloride = 31.0 percent
- Carbon disulfide = 32.8 percent

CRA has provided iso-concentration contour maps (contour maps) for groundwater quality data. CRA created the contours using SURFER version 10 software. SURFER interpolates the groundwater quality data into a uniform grid and then draws contours. Where a compound was not detected, CRA used 10 percent of the detection limit as the value for drawing the contours. Where estimated concentrations (qualified with "J") were reported at concentrations less than the reporting detection limit, CRA used the estimated value for constructing the contours. CRA converted the results to logarithmic values prior to constructing the contours for the organic parameters to better reflect the logarithmic distribution of these data. The rationale for this approach was described in detail in a letter from CRA to USEPA dated May 30, 2013 responding to USEPA comments on the contouring methodology.

The following is a summary of the frequency of detection of the VOCs in each aquifer for the September 2013 and April 2014 groundwater quality monitoring results:

Parameter	Number of Detections/Number of Samples		
	Upper Aquifer	Intermediate Aquifer	Lower Aquifer
Benzene	13/24	0/27	0/7
1,1-DCA	15/24	12/27	0/7
cis-1,2-DCE	12/24	9/27	0/7
Vinyl chloride	8/24	9/27	1/7
Carbon disulfide	4/24	12/27	3/7

When a VOC or SVOC was not detected in a given aquifer, CRA did not prepare a contour map. For example, benzene was not detected in groundwater samples from the Lower Aquifer monitoring wells, and as such, CRA did not prepare a Lower Aquifer benzene contour map. When a VOC or SVOC was detected in a given aquifer, CRA set the lowest contour value equal to Remedial Action Objectives for groundwater (GW RAOs). Most VOCs and SVOCs were not detected in any samples at concentrations greater than their GW RAOs. In these cases, such as vinyl chloride in the Upper Aquifer, CRA posted the results on the drawing but did not generate contour lines. At the request of the USEPA, CRA has provided contours for both the September 2013 (S4) and April 2014 (S5) monitoring round results. The September-October 2011 monitoring data are also shown on the figures as they represent "baseline" groundwater conditions and the onset of the GMP.

4.2.1 Benzene

As shown in Table 4.1, benzene was detected in 13 of 58 groundwater samples collected from the monitoring well network during this reporting period, or 22.4 percent of the groundwater samples. The detected concentrations of benzene ranged from 0.13 J² µg/L to 23 µg/L. Figure 4.1 shows routine groundwater quality monitoring results for benzene in S4 and S5 in the Upper Aquifer.

The concentration of benzene was greater than the Primary MCL of 5 µg/L in both of the groundwater samples collected from Upper Aquifer monitoring well WT115B and in one groundwater sample collected from Upper Aquifer monitoring well WT115A during the monitoring period. As shown on Figure 4.1, monitoring wells WT115A and WT115B are Upper Aquifer monitoring wells located in the southeast corner of the, near the limit of waste. The historic benzene results for routine groundwater monitoring samples collected from WT115A

² A J value indicated that the concentration is estimated.

(Upper Aquifer Well), WT115B (Upper Aquifer Well), and WT115C (Intermediate Aquifer Well) are as follows:

WT115A/B/C Benzene Concentrations (µg/L)			
Date	WT115A	WT115B	WT115C
11/6/2008	5.7/9.3	Not Installed	Not Installed
2/12/2009	12	Not Installed	Not Installed
5/6/2009	1.0 U/0.43 J	Not Installed	Not Installed
8/5/2009	9.9	Not Installed	Not Installed
11/6/2009	12/12	Not Installed	Not Installed
3/2/2010	9.8	Not Installed	Not Installed
6/17/2011	0.69 J	Not Installed	Not Installed
9/15/2010	10	Not Installed	Not Installed
12/13/2010	16	Not Installed	Not Installed
3/11/2011	3.6	30	1.0 U
6/22/2011	1.0 U	29	1.0 U
9/20/2011	2.9	11	1.0 U
12/14/2011	Not Sampled	34	Not Sampled
4/26/2012	1.0 U	30	1.0 U
9/20/2012	16	31	Not Sampled
4/25/2013	1.0 U/1.0 U	32	1.0 U
9/24/2013	7	22	1.0 U
4/24/2014	1.0 U	23	1.0 U
Notes:			
5.7/9.3	Duplicate sample result		
J	Estimated concentration		
U	Non-detect at the associated value		

Phase III monitoring wells WT115B and WT115C were installed in the Upper and Intermediate Aquifers, respectively, to delineate benzene detected in samples from WT115A in the Upper Aquifer. The detections of benzene in samples from WT115B represent the maximum concentrations of benzene in the Upper Aquifer while the data from Intermediate Aquifer monitoring well WT115C provide vertical delineation of the Upper Aquifer benzene plume.

Benzene was also detected in routine groundwater monitoring samples collected from five other monitoring wells during S4 and S5 groundwater quality monitoring rounds, as follows:

Well	Number of Detections/Number of Samples	Range of Benzene Concentrations (µg/L)
WT101A	2/2	0.88 J – 1.8
WT106A	2/2	0.15 J – 0.18 J
WT111A	2/2	0.26 J – 0.49 J
WT116A	2/2	2.5 – 3.4
WT122A	2/2	0.32 J - 0.37 J
Notes:		
J	Estimated concentration	

All five wells of these wells where benzene was detected are in the Upper Aquifer. As shown on Figure 4.1, the Upper Aquifer monitoring wells are located along the southern limit of waste or, in the case of WT106A and WT121A, south of the southeast corner of the Site. Benzene was not detected (RDL=1.0 µg/L) in any groundwater samples collected from Intermediate or Lower Aquifer monitoring wells during S4 and S5.

The pattern of low concentrations of benzene dissolved in Upper Aquifer groundwater along part of the southern edge of the landfill is consistent with a relatively weak local source of benzene somewhere in the vicinity of WT115A and WT115B. The benzene concentrations in groundwater samples collected from WT115B range between 11 µg/L and 34 µg/L, while benzene concentrations in groundwater samples from WT115A continue to fluctuate between less than 1 µg/L to 16 µg/L. There are some minor variations in the contours from round to round, with benzene detected in nine monitoring wells during the S2 (September 2012) and S3 (April 2013) monitoring rounds compared to seven monitoring wells during the S4 (September 2013) and S5 (April 2014) monitoring rounds.

4.2.2 1,1-Dichloroethane (1,1-DCA)

As summarized in Table 4.1, 1,1-DCA was detected in 27 of 58 routine groundwater samples collected from the monitoring well network during this reporting period, or 46.6 percent of the samples. The detections of 1,1-DCA ranged from 1.3 µg/L to 6.9 µg/L. There is no MCL for 1,1-DCA. USEPA requested that the Himco Site Trust compare 1,1-DCA results to the calculated Tapwater Regional Screening Level (RSL) of 240 µg/L, which is based on an excess cancer risk of 1×10^{-5} .

Figures 4.2 and 4.3 show the distribution of 1,1-DCA in the Upper and Intermediate Aquifers, respectively. 1,1-DCA was detected in groundwater samples collected from the following monitoring wells during S4 and S5:

Well	Number of Detections/Number of Samples	Range of 1,1-DCA Concentrations (µg/L)
WT101A	2/2	4.0 - 6.1
WT101D	2/2	4.1 - 4.2
WT101E	2/2	2.8- 3.2
WT106A	2/2	1.9 - 2.1
WT111A	2/2	3.1 - 5.9
WT114B	3/3	1.3
WT114C	2/2	1.7 - 1.9
WT115A	2/2	1.0 U - 3.0
WT115B	2/2	4.9 - 5.6
WT115C	3/3	3.0 - 3.2
WT116A	2/2	3.0 - 4.0
WT121A	2/2	1.4 - 1.8
WT122A	2/2	5.6 - 6.9
Notes:		
U Non-detect at the associated value		

1,1-DCA was detected in groundwater samples collected during the reporting period from Upper and Intermediate Aquifer monitoring wells located along the southern Site boundary. 1,1-DCA was also detected in groundwater samples collected from Upper Aquifer monitoring wells WT106A and WT121A, located south of the Site. The detected concentrations were significantly less than the calculated Tapwater RSL of 240 µg/L. 1,1-DCA was also detected in groundwater samples from Intermediate Aquifer monitoring well WT114C, located east of the Site. 1,1-DCA was not detected in groundwater samples collected from Intermediate Aquifer Monitoring wells WT120A and WT120B, which are located further east and delineate the eastern limit of 1,1-DCA in the Intermediate Aquifer.

1,1-DCA was not detected (RDL=1.0 µg/L) in groundwater samples collected from any of the Lower Aquifer monitoring wells during this reporting period.

Consistent with previous 1,1-DCA monitoring data and reports, the pattern of widespread, low-concentration 1,1-DCA detections is not consistent with a distinct, high-concentration VOC source. The distribution of 1,1-DCA in groundwater at the Site is more consistent with residual contamination undergoing degradation in the absence of ongoing contaminant loading. The S4

and S5 1,1-DCA results are similar to the baseline monitoring round from September-October 2011.

4.2.3 cis-1,2-Dichloroethene (cis-1,2-DCE)

cis-1,2-DCE was detected in 21 of 58 routine groundwater samples collected from during this reporting period, or 36.2 percent of the samples (Table 4.1). The range of detected concentrations was from 0.18 J µg/L to 2.3 µg/L. None of these concentrations were greater than the Primary MCL of 70 µg/L for cis-1,2-DCE.

The distribution of cis-1,2-DCE is similar to the distribution of 1,1-DCA. cis-1,2-DCE was detected in groundwater samples from the following wells:

Well	Number of Detections/Number of Samples	Range of cis-1,2-DCE Concentrations (µg/L)
WT101A	1/2	1.0 U - 0.46 J
WT101D	2/2	0.55 J - 0.57 J
WT101E	2/2	0.38 J - 0.43 J
WT106A	2/2	0.38 J - 0.46 J
WT114B	3/3	0.40 J - 0.45 J
WT115A	1/2	1.0 U - 0.18 J
WT115B	2/2	1.9 J - 2.2
WT115C	2/3	1.0 U - 0.47 J
WT116A	2/2	2.1- 2.3
WT121A	2/2	0.96 J - 1.0
WT122A	2/2	0.91 J - 0.93 J
Notes:		
J Estimated concentration		
U Non-detect at the associated value		

As shown on Figure 4.4 and Figure 4.5, cis-1,2-DCE was detected in groundwater samples collected from the Upper and Intermediate Aquifer monitoring wells located along the southern Site boundary. cis-1,2-DCE was detected in the groundwater samples collected from WT106A and WT121A, located southeast of the Site, at a maximum concentrations of 1.0 µg/L. cis-1,2-DCE was also detected east of the Site in groundwater samples collected from Intermediate Aquifer monitoring well WT114B, but not in samples from Intermediate Aquifer monitoring wells WT120A and WT120B, located further east of the Site. When detected, the concentrations of cis-1,2-DCE were significantly less than the Primary MCL of 70 µg/L for cis-1,2-DCE.

cis-1,2-DCE was not detected (RDL=1.0 µg/L) in groundwater samples collected from Lower Aquifer monitoring wells.

The distribution of cis-1,2-DCE in groundwater near the Site during the S4 and S5 monitoring events were similar to each other and consistent with baseline monitoring results. The spatial pattern of widespread, low-concentration cis-1,2-DCE detections and the stable distribution of VOCs over time is consistent with residual contamination undergoing degradation in the absence of ongoing contaminant loading.

4.2.4 Vinyl Chloride

Vinyl chloride was detected in 18 of 58 groundwater samples collected from the monitoring well network during this reporting period, or 31.0 percent of the samples (Table 4.1). When vinyl chloride was detected, its concentration ranged from 0.23 J µg/L to 1.5 µg/L, as follows:

Well	Number of Detections/Number of Samples	Range of Vinyl Chloride Concentrations (µg/L)
WT106A	1/2	1.0 U - 0.26 J
WT106B	2/2	1.0 - 1.3
WT111A	1/2	1.0 U - 0.25 J
WT115A	1/2	0.23 J - 1.0 U
WT115B	1/2	0.65 J - 2.0 U
WT115C	2/3	0.23 J - 1.0 U
WT116A	2/2	0.68 J - 1.1 J
WT121B	2/2	0.81 J - 1.3
WT122A	2/2	0.88 J - 1.5
WT122B	2/2	0.48 J - 0.85 J
WT122C	1/2	1.0 U - 0.30 J
WTE3	1/2	1.0 U - 0.37 J
Notes:		
J	Estimated concentration	
U	Non-detect at the associated value	

None of these concentrations were greater than the Primary MCL of 2 µg/L for vinyl chloride. As shown on Figure 4.6, vinyl chloride was detected in groundwater samples collected from Upper Aquifer monitoring wells located along the southern limit of waste and the southern Site boundary. The concentrations of vinyl chloride detected in Upper Aquifer groundwater samples were less than the RDL of 1 µg/L. With the exception of the September 2013 result of 0.26 J µg/L in the groundwater sample collected from WT106A, vinyl chloride was not detected

in any groundwater samples collected from Upper Aquifer monitoring wells located south and east of the Site.

Figure 4.7 shows vinyl chloride results for the Intermediate Aquifer for S4 and S5. Vinyl chloride was present in groundwater samples collected from monitoring well WT115C, located in the southwest corner of the Site and the monitoring wells south of the Site.

Figure 4.8 shows vinyl chloride results for the Lower Aquifer for S4 and S5. The concentrations of vinyl chloride detected in Lower Aquifer groundwater samples were less than the RDL of 1 µg/L.

Vinyl chloride is produced in reducing environments by the degradation of chlorinated organic compounds such as trichloroethylene (TCE). The distribution of vinyl chloride in groundwater in the vicinity of the Site during the S4 and S5 monitoring rounds is consistent with the baseline monitoring results. The relatively low-level, stable vinyl chloride concentrations are consistent with residual contamination undergoing degradation in the absence of an ongoing source of VOC contaminants.

4.2.5 Carbon Disulfide

Carbon disulfide was detected in 19 of 58 routine groundwater monitoring samples collected during the reporting period, or 32.8 percent of the samples (Table 4.1). The detected concentrations of carbon disulfide ranged from 0.20 J µg/L to 2.9 µg/L. There is no Primary MCL for carbon disulfide. USEPA has requested that the Himco Site Trust compare carbon disulfide results to the calculated Tapwater RSL of 10,000 µg/L, which is based on an excess cancer risk of 1×10^{-5} .

Carbon disulfide was detected in groundwater samples from the following wells:

Well	Number of Detections/Number of Samples	Range of Carbon Disulfide Concentrations (µg/L)
WT101A	1/2	1.0 U - 0.22 J
WT101E	2/2	0.93 J - 1.7
WT102B	1/2	1.0 U - 1.6
WT106B	2/2	0.59 J - 0.89 J
WT106C	1/2	1.0 U - 0.39 J
WT114C	2/2	0.27 J - 0.53 J
WT115B	1/2	1.4 U - 2.9
WT120A	1/3	1.0 U - 0.20 J
WT120B	1/2	1.0 U - 0.84 J

Well	Number of Detections/Number of Samples	Range of Carbon Disulfide Concentrations (µg/L)
WT121A	1/2	1.0 U - 0.28 J
WT121B	1/2	1.0 U - 1.5
WT122A	1/2	1.0 U - 0.42 J
WT122B	1/2	1.0 U - 0.36 J
WT122C	1/2	1.0 U - 0.32 J
WTE3	2/2	0.53 J - 0.96 J
Notes:		
J	Estimated concentration	
U	Non-detect at the associated value	

The detections of carbon disulfide in groundwater samples collected during the reporting period are all significantly less than the Tapwater RSL. The distribution of carbon disulfide in groundwater in the vicinity of the Site during the S4 and S5 monitoring rounds is consistent with the baseline monitoring results. Similar to vinyl chloride, the degradation of chlorinated organic compounds may produce carbon disulfide. As shown on Figure 4.9, Figure 4.10, and Figure 4.11, the distribution of carbon disulfide is similar to the distribution of vinyl chloride. The low-level, stable carbon disulfide concentrations are consistent with residual organic contamination undergoing degradation.

4.3 Semi-Volatile Organic Compounds (SVOCs)

CRA collected 58 groundwater samples from 27 monitoring wells in September 2013 and April 2014, and analyzed them for SVOCs. Bis(2-ethylhexyl)phthalate is the only SVOC parameter that USEPA requires the PSDs to monitor routinely. Table 4.1 summarizes the SVOCs detected in groundwater samples collected in September 2013 and April 2014.

Bis(2-ethylhexyl)phthalate was detected at a concentration of 3 µg/L in two method blanks collected during the S4 and S5 monitoring rounds. Ten samples had bis(2-ethylhexyl)phthalate concentrations greater than the RDL, but less than ten times (30 µg/L) the method blank concentration. Typically, when this occurs, bis(2-ethylhexyl)phthalate concentration in the associated monitoring sample becomes the detection limit. As a result, concentrations of bis(2-ethylhexyl)phthalate were not detected in the S4 and S5 samples.

Historically, bis(2-ethylhexyl)phthalate was detected in five to ten percent of the monitoring samples at concentrations less than its Primary MCL of 6 µg/L. Therefore, despite the method blank contamination and adjusted detection limits, the S4 and S5 data are consistent with historic bis(2-ethylhexyl)phthalate results.

Bis(2-ethylhexyl)phthalate has typically been detected in groundwater samples that are widely dispersed across the Site, both laterally and vertically, and typically at low concentrations. This is not the pattern that a distinct high concentration source of SVOCs would create, which indicates that there is not a plume of bis(2-ethylhexyl)phthalate emanating from the landfill. In fact, the presence of bis(2-ethylhexyl)phthalate in historic groundwater samples collected from monitoring wells at relatively large distances both upgradient and downgradient of the Site suggests that the detected concentrations in groundwater samples from the Site may not be completely, if at all, attributable to Site activities.

4.4 Metals and General Chemistry Analytes

4.4.1 Introduction

CRA collected 58 groundwater samples from 27 monitoring wells during S4 and S5 for select metals and general chemistry analyses. Tables 4.2, 4.3, and 4.4 summarize the metals and general chemistry results for the groundwater samples collected from the Upper, Intermediate, and Lower Aquifers, respectively, during the reporting period.

CRA's approach to screening VOCs and SVOCs is different than the approach to screening metals and general chemistry parameters because VOCs and SVOCs are typically the result of waste disposal activities while concentrations of metals and general chemistry parameters are also occur naturally in groundwater. Additionally, two of the contaminants of concern (CoCs), iron and calcium, are mineral nutrients, and drinking water can provide a viable fraction of the total recommended daily intake of these nutrients.

CRA analyzed groundwater samples collected from monitoring wells WT102A, WT102B, and WT102C for metals and general chemistry parameters. These wells are located approximately 1,260 feet north of and upgradient of the Site. The 2012 Himco Annual Groundwater Monitoring Report (CRA, 2012) included a statistical analysis of data from these wells to determine background concentrations to compare with concentrations measured at other locations at the Site. Tables 4.2 through 4.4 provide the background concentrations for the metals parameters for the Upper, Intermediate and Lower Aquifers. Several of the background threshold values (BVs) exceeded their respective Primary MCL, Secondary MCL or Recommended Dietary Allowance (RDA).

The CD states that the GW RAOs are to prevent the use of groundwater that contains Site-related carcinogens and non-carcinogens in excess of MCLs. The CD also states that the GW RAOs are:

"To prevent the use of groundwater which contains site-related sodium, calcium, and iron in excess of their upper intake limit or recommended dietary allowances for sensitive populations."

Initially, CRA screened the metals data against the Primary MCLs; however, there are no Primary MCLs for sodium, calcium and iron. There are Secondary MCLs for sodium (250 micrograms per liter [mg/L]) and iron (0.3 mg/L), but these are aesthetic criteria and are not health based. There is a health-based Tapwater RSL for iron of 26 mg/L. The RDA for calcium is 250 mg/L. In order to establish appropriate GW RAOs, CRA ranked these criteria as follows:

1. Primary MCLs
2. Tapwater RSL
3. RDA
4. Secondary MCLs

For example, there is no Primary MCL for iron, so the next level of criteria is the health based RSL Tapwater of 26 mg/L. There is no Primary MCL, Tapwater RSL or RDA for chloride. Therefore, the best available criterion for chloride is the Secondary MCL of 250 mg/L.

The concentrations of the following GMP parameters exceeded the metals and general chemistry GW RAOs in at least one of the aquifer units:

Number of Exceedances of GW RAOs/Number of Samples			
Parameter	Upper Aquifer	Intermediate Aquifer	Lower Aquifer
Arsenic	0/24	6/27	1/7
Calcium	4/24	0/27	0/7
Iron	1/24	0/27	0/7
Lead	1/24	0/27	0/7
Manganese	5/24	0/27	0/7
Sodium	3/24	0/27	0/7
Chloride	1/24	0/27	0/7

CRA selected arsenic, calcium, iron, lead, manganese, sodium, and chloride for discussion purposes as these analytes are the only metals and general chemistry parameters included in the GMP that were detected at concentrations greater than their respective GW RAOs.

4.4.2 Arsenic

Arsenic was detected in 46 of the 58 routine groundwater quality monitoring samples collected during the reporting period. Arsenic concentrations ranged from less than the RDL (1.0 µg/L) to 21 µg/L. The GW RAO for arsenic is 10 µg/L, which is equal to its Primary MCL. Arsenic and lead are the only metal analytes detected during the S4 and S5 monitoring rounds at concentrations greater than a GW RAO that is based on a Primary MCL.

The concentrations of arsenic were not greater than the GW RAO in any of the samples from the Upper Aquifer monitoring wells. The concentration of arsenic in Upper Aquifer groundwater samples ranged from less than the RDL (1.0 µg/L) to 8.6 µg/L.

Figure 4.12 shows the arsenic concentrations in groundwater samples collected from Intermediate Aquifer monitoring wells. The concentrations of arsenic exceeded the GW RAO in samples from the following Intermediate Aquifer monitoring wells:

Well	Date	Arsenic Concentration (µg/L)
WT106B	9/25/2013	12
WT106B	4/23/2014	13
WT114C	9/26/2013	21
WT114C	4/23/2014	19
WT121B	9/25/2013	14
WT121B	4/22/2014	12

Intermediate Aquifer monitoring well WT114C is located immediately east of the Site. WT106B is located south of the Site, and WT121B is located southeast of the Site (east of WT106B). The S4 and S5 arsenic results for these wells are consistent with previous results.

Figure 4.13 shows the arsenic concentrations in groundwater samples collected from Lower Aquifer monitoring wells. The maximum arsenic concentration in groundwater samples collected during this reporting period from the Lower Aquifer was 11 µg/L, which is greater than the GW RAO of 10 µg/L (WT106C in April 2014).

4.4.3 Calcium

Calcium was detected in all of the 58 routine groundwater quality monitoring samples collected during this reporting period. Calcium concentrations in groundwater samples ranged from 35,000 µg/L to 730,000 µg/L. The GW RAO for calcium is 250,000 µg/L, and is equal to its RDA.

Figure 4.14 shows average calcium concentration contours for the Upper Aquifer for this reporting period. There is a plume of calcium in the Upper Aquifer defined by the GW RAO (250,000 µg/L). Calcium concentrations in the Upper Aquifer greater than the GW RAO were detected in groundwater samples collected from the following monitoring wells:

Well	Date	Calcium Concentration (µg/L)
WT115B	9/24/2013	490,000
WT115B	4/24/2014	290,000
WT116A	9/24/2013	730,000
WT116A	4/24/2014	500,000

The maximum calcium concentrations in the Upper Aquifer were detected in groundwater samples collected from monitoring well WT116A, located within the limit of the waste in the south-central portion of the Site. Calcium concentrations have typically exceeded the GW RAO in groundwater samples collected from monitoring well WT115B, located in the southeast portion of the Site.

Calcium concentrations in the Intermediate and Lower Aquifers were less than the GW RAO.

The calcium concentrations in groundwater samples collected at the Site are stable and only exceed the GW RAO in the immediate vicinity of the former landfill area. The calcium data for the S4 and S5 routine groundwater quality monitoring rounds are generally consistent with the baseline groundwater monitoring results from September 2011.

4.4.4 Lead

Lead was not detected at concentrations greater than its GWRAO in any of the Intermediate or Lower Aquifer groundwater samples collected during the S4 and S5 routine groundwater quality monitoring rounds. Lead was detected at concentrations greater than its GWRAO in 1 of the 24 routine groundwater quality monitoring samples collected from Upper Aquifer monitoring wells during this reporting period. Lead concentrations ranged from less than the RDL (1.0 µg/L) to 30 µg/L. The GW RAO for lead is 15 µg/L, which is equal to its Primary MCL. Lead and arsenic are the only metal analytes detected during the S4 and S5 monitoring rounds at concentrations greater than a GW RAO that is based on a Primary MCL.

Figure 4.15 shows the lead concentrations in groundwater samples collected from Upper Aquifer monitoring wells. The lead concentration (30 µg/L) was greater than the GW RAO in the September 2013 groundwater sample collected from monitoring well WT116A, but not in a subsequent sample (3.0 µg/L) collected in April 2014.

The lead concentrations in groundwater samples collected during S4 and S5 concentrations are consistent with previous results, usually less than the RDL with occasional exceedances of the GW RAO.

4.4.5 Iron

Iron was detected in 55 of the 58 routine groundwater quality monitoring samples collected during the reporting period. Iron concentrations ranged from less than 200 µg/L to 29,000 µg/L. The GW RAO for iron is 26,000 µg/L, which is the Tapwater RSL.

Figure 4.16 shows iron concentration contours for the Upper Aquifer. There is a plume of iron in the Upper Aquifer defined by the GW RAO of 26,000 µg/L. Iron concentrations, at 29,000 µg/L were greater than the GW RAO in the September 2013 sample collected from WT101A. In April 2014, the iron concentration in the groundwater sample collected from WT101A was 20,000 µg/L, which is less than the GW RAO. WT101A is located on Site and along the southern limit of waste. The rest of the iron concentrations in samples collected during the reporting period from Upper Aquifer wells were less than the GW RAO of 26,000 µg/L.

The maximum iron concentrations in the Intermediate and Lower Aquifers were 10,000 µg/L and 3,200 µg/L, respectively, which are less than the GW RAO.

The iron concentrations in groundwater samples collected near the Site for S4 and S5 were stable and consistent the baseline groundwater monitoring results from September 2011.

4.4.6 Manganese

Manganese was detected in 57 of the 58 routine groundwater quality monitoring samples collected during the reporting period. The concentrations of manganese in groundwater samples ranged from 1.1 µg/L to 2,200 µg/L. The GW RAOs for manganese in the Upper and Lower Aquifers are 1,070 µg/L and 1,140 µg/L, respectively, which are the respective BVs for those aquifers. The GW RAO for manganese in the Intermediate Aquifer is 880 µg/L, which is its Secondary MCL.

Figure 4.17 shows the concentration of manganese in routine groundwater quality monitoring samples collected from the Upper Aquifer during the reporting period. There is a plume of manganese in the Upper Aquifer defined by the 1,070 µg/L contour. The samples that contained manganese at concentrations that were greater than the GW RAO were as follows:

Well	Date	Manganese Concentration (µg/L)
WT101A	9/24/2013	2,200
WT101A	4/24/2014	1,300
WT115A	9/24/2013	1,300
WT116A	9/24/2013	1,500
WT116A	4/23/2014	1,500

WT101A, WT115A and WT116A are located along the southern limit of waste. All other manganese concentrations in Upper Aquifer well samples were less than the GW RAO of 1,070 µg/L.

The maximum manganese concentrations in the Intermediate and Lower Aquifer well samples were 230 µg/L and 48 µg/L, respectively, which are less than the GW RAO.

The manganese data for the S4 and S5 routine groundwater quality monitoring rounds are generally consistent with baseline groundwater monitoring results from September 2011.

4.4.7 Sodium

Sodium was detected in all 58 of the routine groundwater quality monitoring samples collected during the reporting period. Sodium concentrations in groundwater samples ranged from 1,500 µg/L to 280,000 µg/L. The GW RAO for sodium is 150,000 µg/L, which is its RDA.

Figure 4.18 shows average sodium concentration contours for the Upper Aquifer. The sodium concentration in the groundwater sample collected from WT116A in the September 2013 was 170,000 µg/L, which is greater than the GW RAO. In April 2014, the sodium concentration in the groundwater sample collected from WT116A was 70,000 µg/L, which is less than the GW RAO. Other than the WT116A sample, only groundwater samples from monitoring well WT114A contained sodium concentrations greater than the GW RAO, as follows:

Well	Date	Sodium Concentration (µg/L)
WT114A	9/26/2013	280,000
WT114A	4/23/2014	250,000
WT116A	9/24/2013	170,000

Monitoring well WT114A is cross gradient of the Site and is located adjacent to the John Weaver Parkway. The source of the sodium (and chloride) in the groundwater samples collected from WT114A is likely road salt applied to the adjacent roadway.

Sodium concentrations in the S4 and S5 groundwater samples from the Intermediate and Lower Aquifers were less than the GW RAO.

The sodium results for the routine groundwater quality monitoring samples for this monitoring period are consistent with baseline groundwater monitoring results from September 2011 and are not the result of former landfill activities.

4.4.8 Chloride

Chloride was detected in all 58 groundwater samples collected from the monitoring well network during this reporting period. The detected concentrations of chloride ranged from 1.7 mg/L to 400 J mg/L. The GW RAO for chloride is 250 mg/L, which is equal to its Secondary MCL.

Figure 4.19 shows chloride concentrations in Upper Aquifer groundwater samples. The April 2014 sample collected from WT114A contained chloride at a concentration that were greater than the GW RAO (400 J mg/L). WT114A is cross gradient of the Site and located adjacent the John Weaver Parkway. The source of the chloride (and sodium) in the groundwater samples collected from WT114A is likely road salt applied to the adjacent roadway.

The maximum chloride concentrations detected in groundwater samples from the Intermediate and Lower Aquifers were 84 mg/L and 22 mg/L, respectively, which are less than the GW RAO of 250 mg/L.

The chloride concentration in routine groundwater quality monitoring samples collected during this reporting period are generally consistent with baseline groundwater monitoring results from September 2011 and are not the result of former landfill activities.

Section 5.0 Conclusions and Recommendations

5.1 Groundwater Elevation Monitoring

Data collected during S4 and S5 indicate that groundwater in the Upper, Intermediate, and Lower Aquifers typically flows south, consistent with the regional groundwater flow direction and previous on-Site monitoring.

5.2 Groundwater Quality Monitoring

5.2.1 VOCs

Benzene was the only VOC detected at concentrations greater than its Primary MCL during the reporting period. Benzene concentrations that were greater than the GW RAO were detected in groundwater samples collected from Upper Aquifer monitoring wells WT115A and WT115B located in the southeast corner of the landfill. The maximum benzene concentration of 23 µg/L was detected in a groundwater sample collected from Upper Aquifer monitoring well WT115B. Benzene was not detected in the groundwater sample collected from Intermediate Aquifer monitoring well WT115C, which provides vertical delineation of the WT115 benzene plume. The September 2013 and April 2014 benzene results for groundwater samples from the WT115 monitoring wells are consistent with the results of previous monitoring rounds. These stable, low-level concentrations are consistent with residual VOC groundwater contamination undergoing degradation.

1,1-DCA, cis-1,2-DCE, vinyl chloride, and carbon disulfide were detected in 31.0 percent to 46.6 percent of routine groundwater quality monitoring samples collected during the reporting period. Unlike the distinct benzene plume in the vicinity of WT115B, these other VOCs were detected at concentrations that were significantly less than their respective GW RAOs. 1,1-DCA, cis-1,2-DCE, vinyl chloride and carbon disulfide detections were clustered along the southern Site boundary. The broad distribution of low-level VOC concentrations of degradation products and the lack of change in the distribution of VOCs over time is consistent with residual VOC groundwater contamination undergoing degradation.

Routine groundwater quality monitoring results for this reporting period (S4 and S5) are similar to each other and consistent with baseline (September 2011) monitoring data for VOCs.

5.2.2 SVOCs

Bis(2-ethylhexyl)phthalate was not detected in the groundwater samples collected from the monitoring well network during S4 and S5 sampling events.

The sporadic presence of bis(2-ethylhexyl)phthalate at relatively low concentrations at large distances apart, both upgradient and down-gradient of the Site, and sporadically with depth, indicate that it is not attributable to Site activities. The S4 and S5 groundwater quality monitoring results are consistent with baseline groundwater monitoring results from September 2011.

5.2.3 Metals and General Chemistry Parameters

Arsenic, calcium, iron, lead, manganese, sodium, and chloride are the only metals and general chemistry parameters detected at concentrations in groundwater samples that exceeded their GW RAOs during this reporting period.

The GW RAO for arsenic is 10 µg/L, which is equal to its Primary MCL. Arsenic and lead are the only metal analytes detected during the S4 and S5 monitoring rounds at concentrations that were greater than a Primary MCL. The concentrations of arsenic exceeded the GW RAO in samples from Intermediate Aquifer monitoring wells WT106B, WT114C, and WT121B. The S4 and S5 arsenic results for these wells are generally consistent with previous results. The maximum arsenic concentrations in groundwater samples collected during this reporting period from the Lower Aquifer monitoring wells was 11 µg/L, which is greater than the GW RAO of 10 µg/L, in a groundwater sample collected from monitoring well WT106C in April 2014.

There is a plume of calcium in the Upper Aquifer defined by the GW RAO of 250,000 µg/L, which is its RDA. Calcium concentrations in the Upper Aquifer that were greater than the GW RAO were detected in groundwater samples collected from Upper Aquifer monitoring wells WT115B and WT116A located along the southern limit of waste. Calcium concentrations in groundwater samples from the Intermediate and Lower Aquifers were less than their GW RAOs.

There is a plume of iron in the Upper Aquifer defined by the GW RAO of 26,000 µg/L, which is its Tapwater RSL. Iron concentrations in the Upper Aquifer that were greater than the GW RAO were detected in groundwater samples collected from monitoring well WT101A, located on Site along the south limit of waste. The maximum iron concentrations in the Intermediate and Lower Aquifers were 10,000 µg/L and 3,200 µg/L, respectively, which are less than the GW RAO.

There is a plume of manganese in the Upper Aquifer defined by the 1,070 µg/L contour, which is its GW RAO derived from its BV. The manganese concentrations in groundwater samples collected from WT101A, WT115A and WT116A, which are located along the southern limit of waste, were greater than the GW RAO. The maximum manganese concentrations in the Intermediate and Lower Aquifer well samples were 220 µg/L and 46 µg/L, respectively, which are less than the GW RAO.

The GW RAO for sodium is 150,000 µg/L, which is its RDA. Sodium concentrations that were greater than the GW RAO were detected in groundwater samples from Upper Aquifer monitoring well WT114A. The sodium detected in groundwater samples from the Upper Aquifer in the vicinity of monitoring well WT114A is cross gradient of the Site and located

adjacent the John Weaver Parkway. The source of the sodium in the groundwater samples collected from WT114A is likely road salt applied to the adjacent roadway.

Chloride concentrations were greater than the GW RAO in all one of the groundwater samples collected from Upper Aquifer monitoring well WT114A. WT114A is cross gradient of the Site and located adjacent the John Weaver Parkway. The source of the chloride (and sodium, as stated above) in the groundwater samples collected from WT114A is likely road salt applied to the adjacent roadway. The maximum chloride concentrations in the Intermediate and Lower Aquifers were 84 mg/L and 22 mg/L, respectively, which are less than the GW RAO of 250 mg/L.

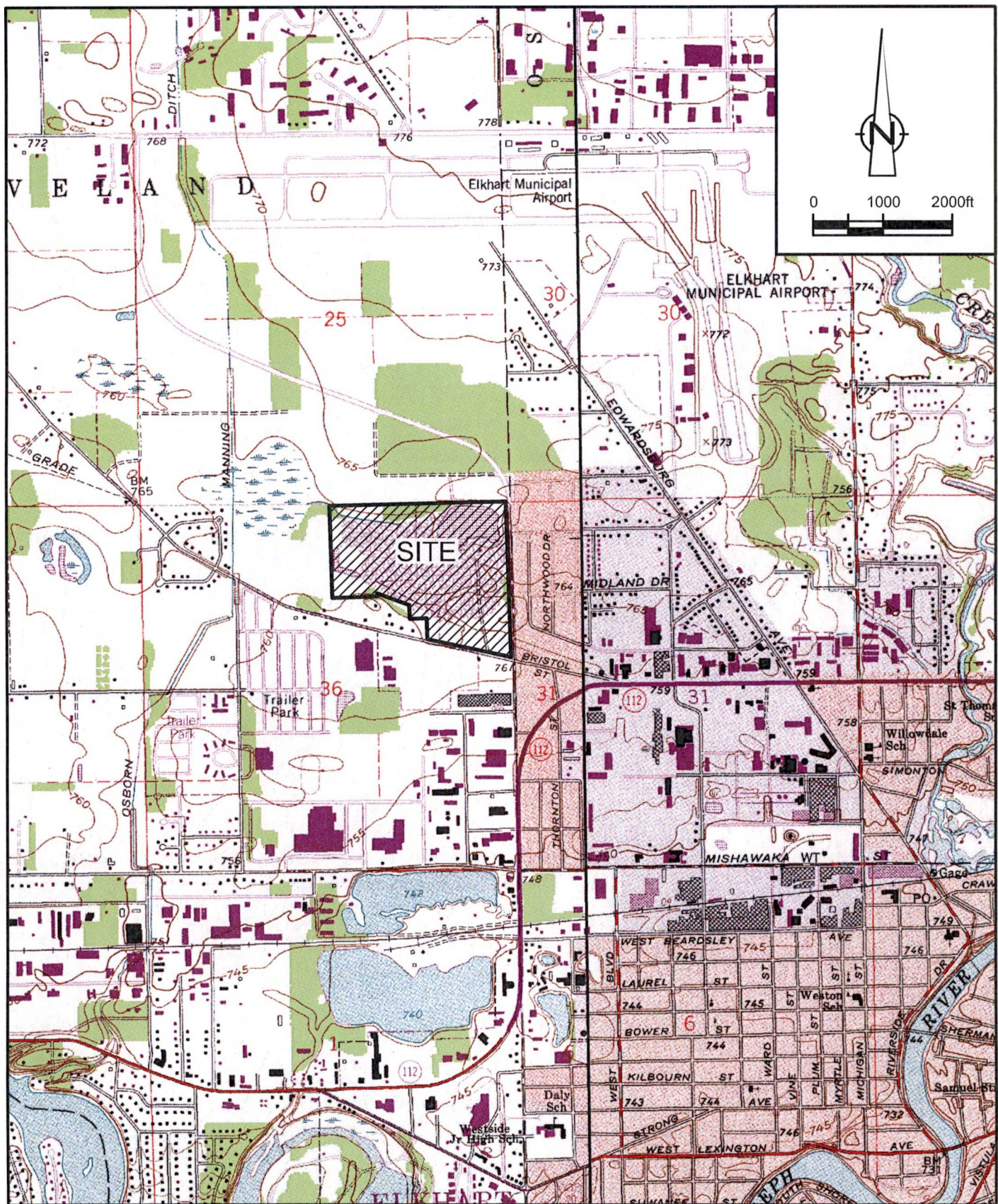
Overall, the metals and general chemistry data for S4 and S5 routine groundwater quality monitoring are consistent with baseline groundwater monitoring results from September 2011 and other previous monitoring data.

5.3 Future Monitoring and Reporting

CRA will continue to measure groundwater elevations at all monitoring wells located at the Site, however, CRA recommends that the routine measurement of surface water elevations cease. Surface water is not impacted by Site conditions and the surface water elevations do not improve the definition of groundwater flow.

The monitoring wells included in the GMP are listed in Table 2.2 and shown on Figure 2.1. Groundwater samples will be collected on a semi-annual basis and will be analyzed for the analytes listed in Table 2.3.

The PSDs will submit routine annual reports of groundwater quality monitoring at the Himco Site. The next groundwater monitoring report will be submitted to USEPA in November 2015 and will include monitoring data collected from September 2014 through June 2015.

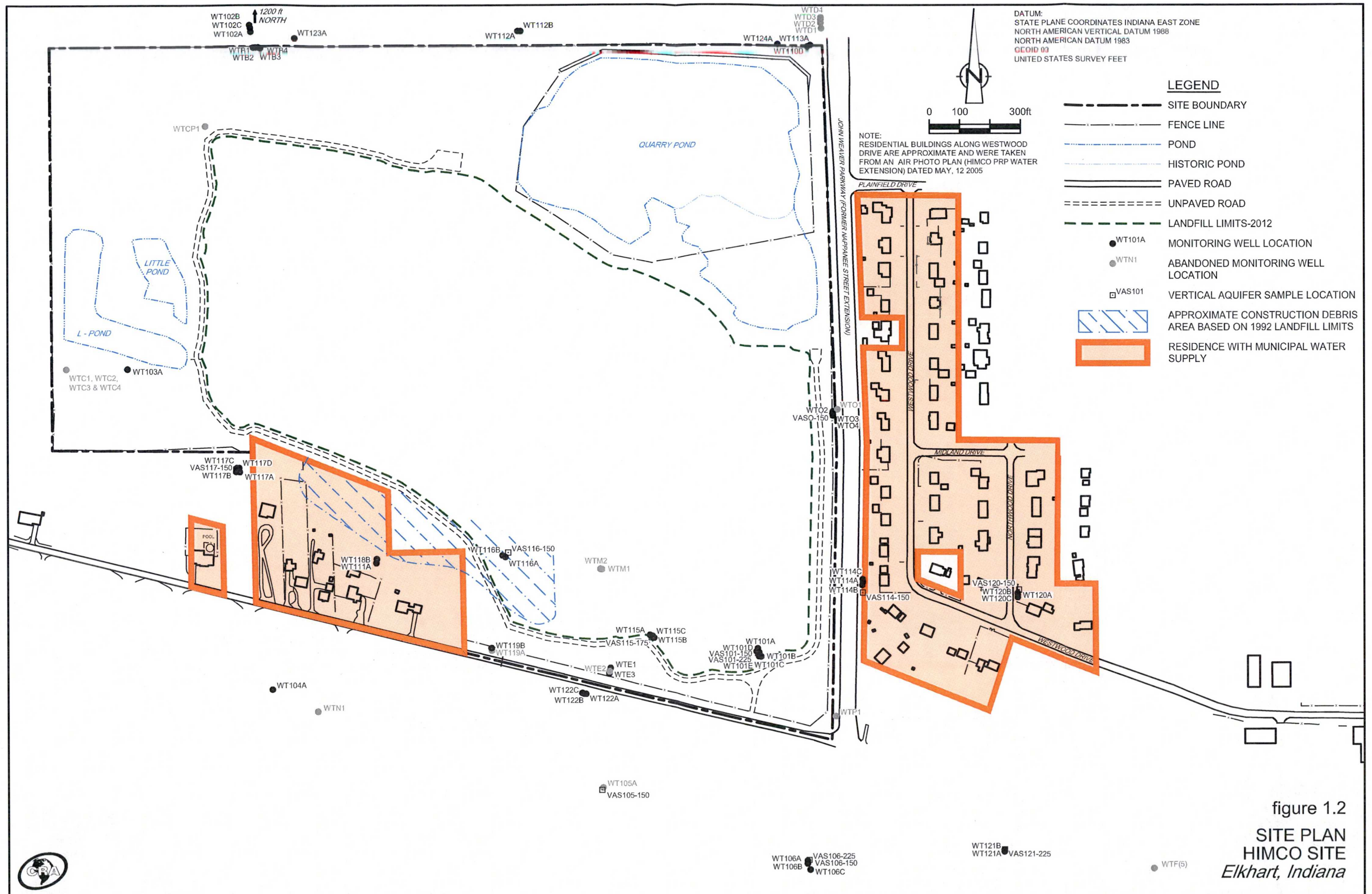


SOURCE: USGS QUADRANGLE MAPS;
ELKHART AND OSCEOLA, INDIANA

figure 1.1

SITE LOCATION MAP
HIMCO SITE
Elkhart, Indiana





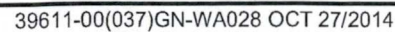


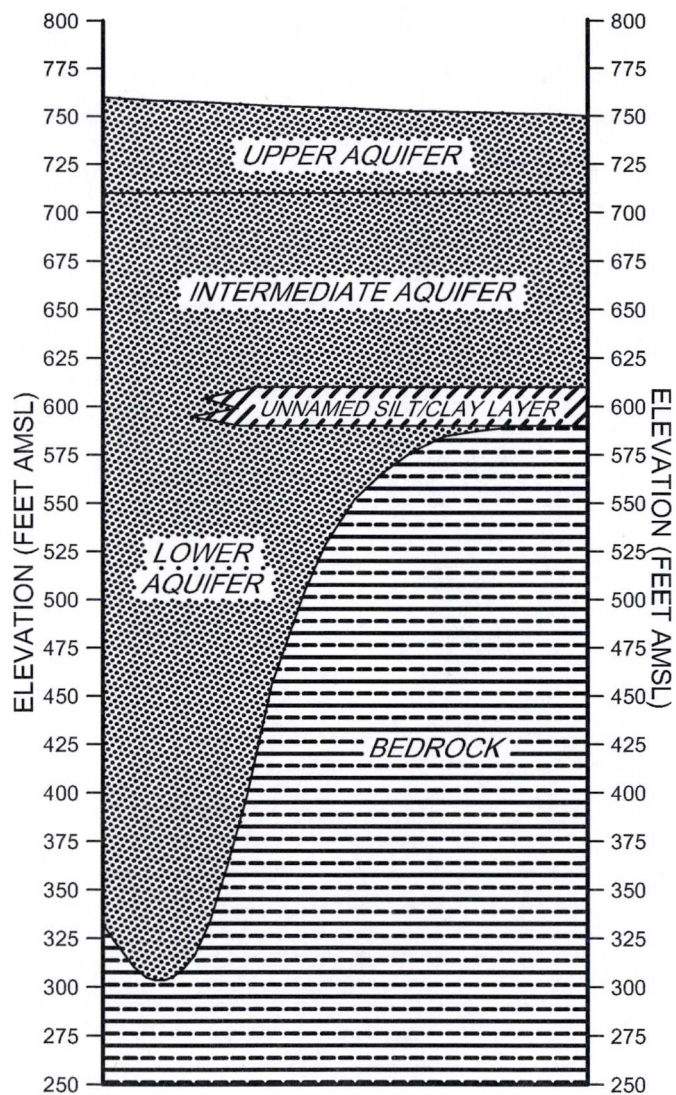
figure 2.1

GROUNDWATER MONITORING PROGRAM
2013 ANNUAL MONITORING REPORT

WT121B
WT121A VAS121-225

WTF(5)

HIMCO SITE
Elkhart, Indiana



LEGEND




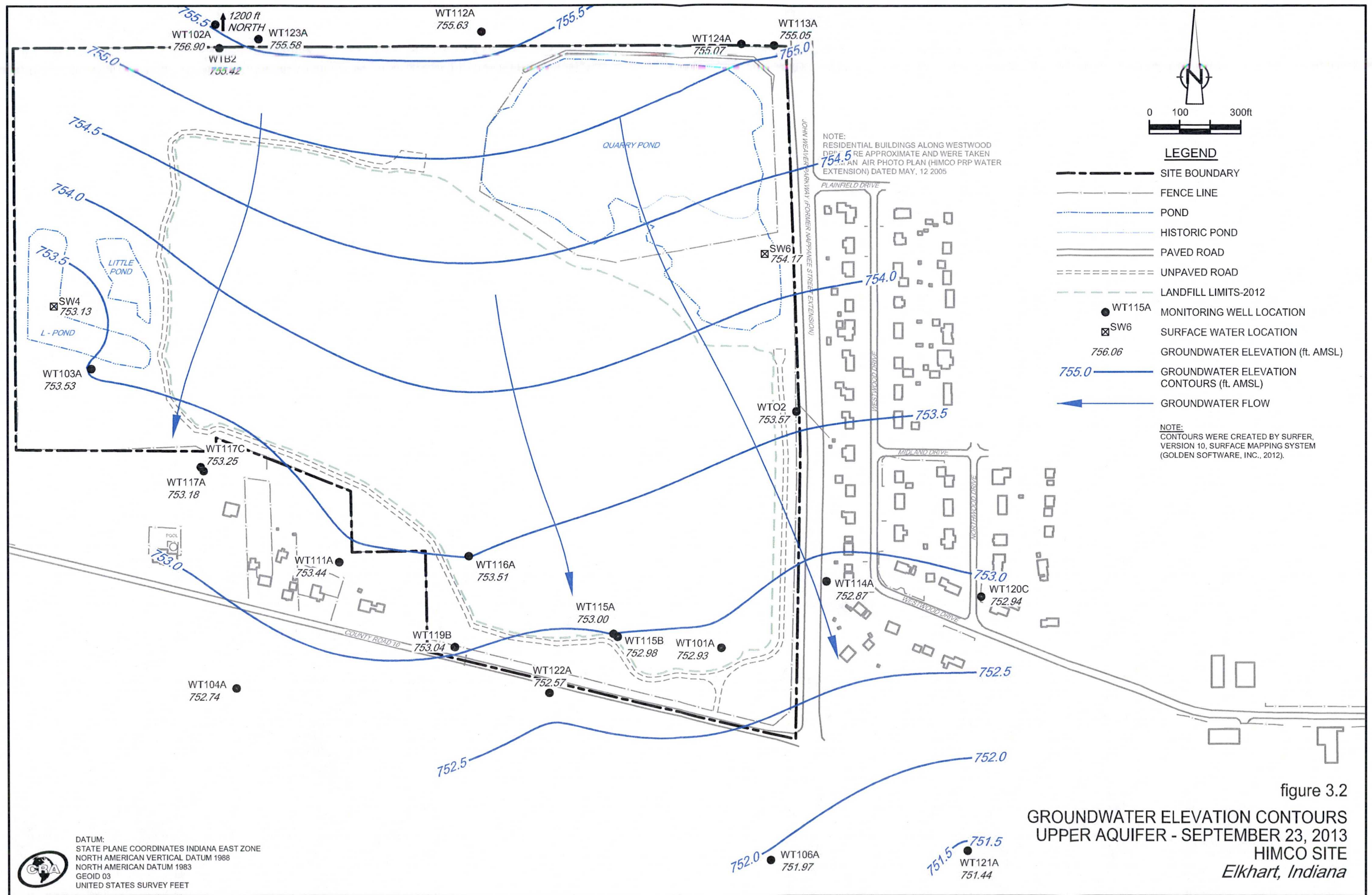
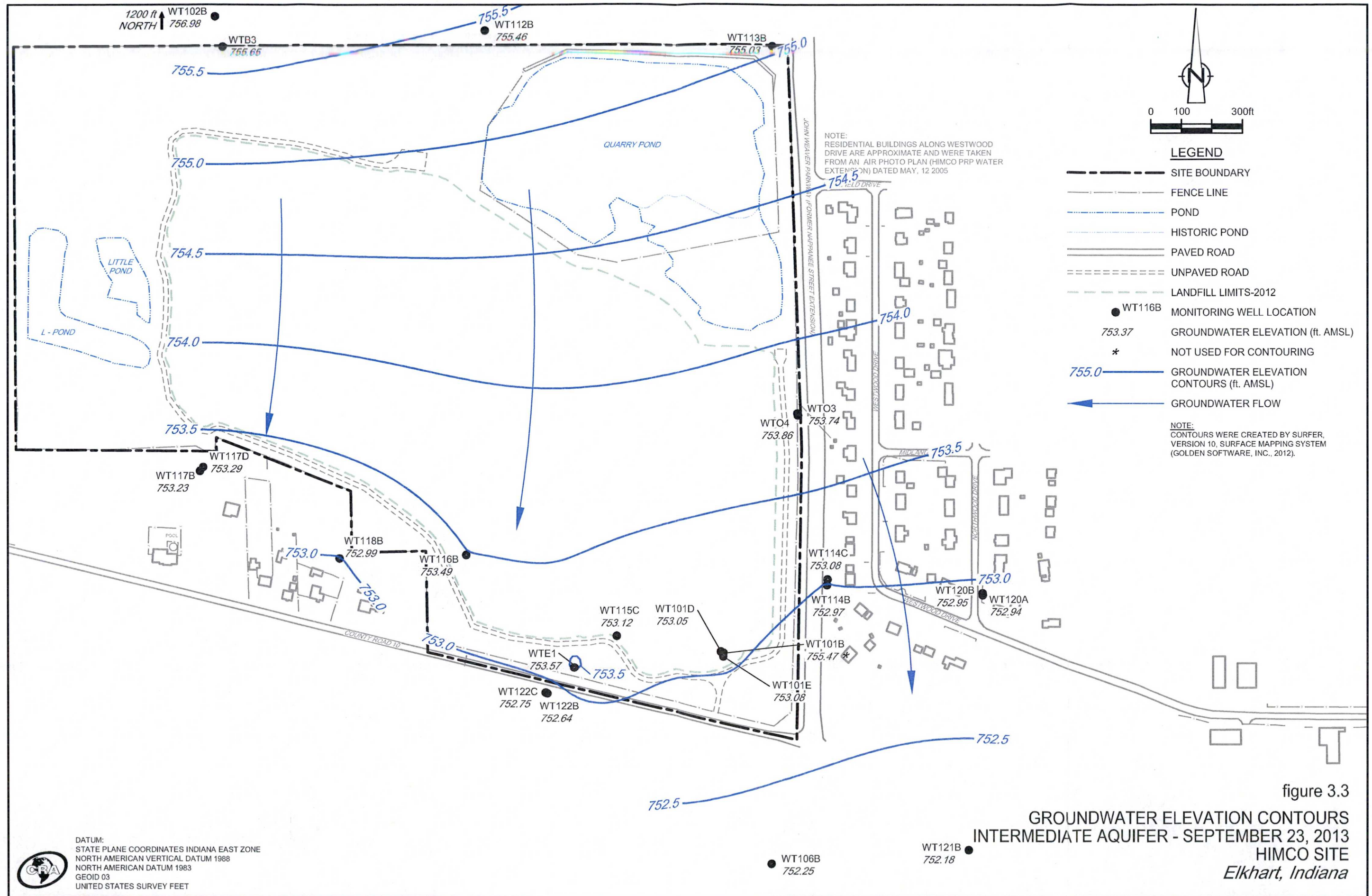
-  SAND AND GRAVEL
-  SILTY, CLAY OR SILT/CLAY
-  SHALE

figure 3.1

SCHEMATIC CROSS-SECTION
HIMCO SITE
Elkhart, Indiana







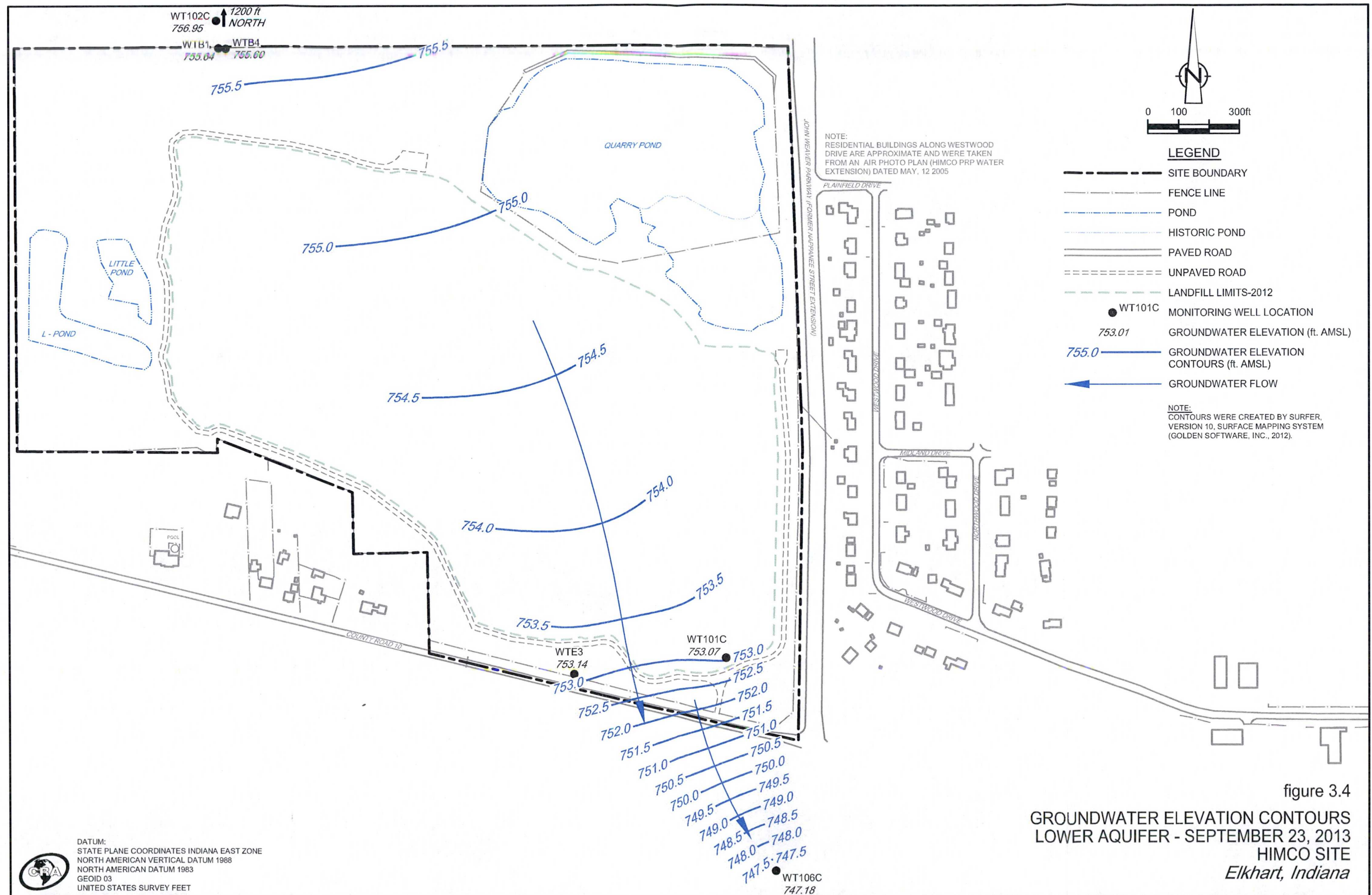
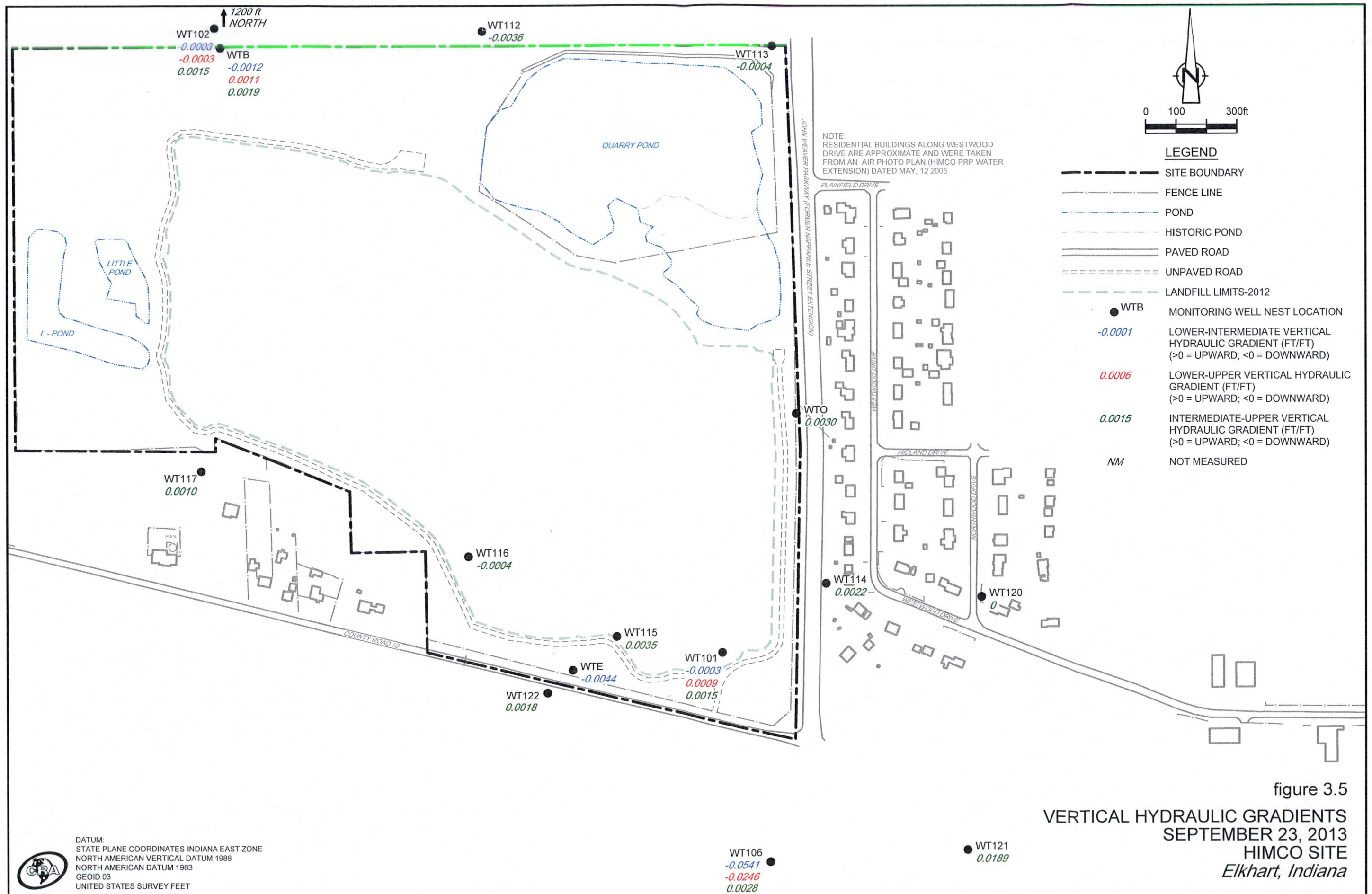
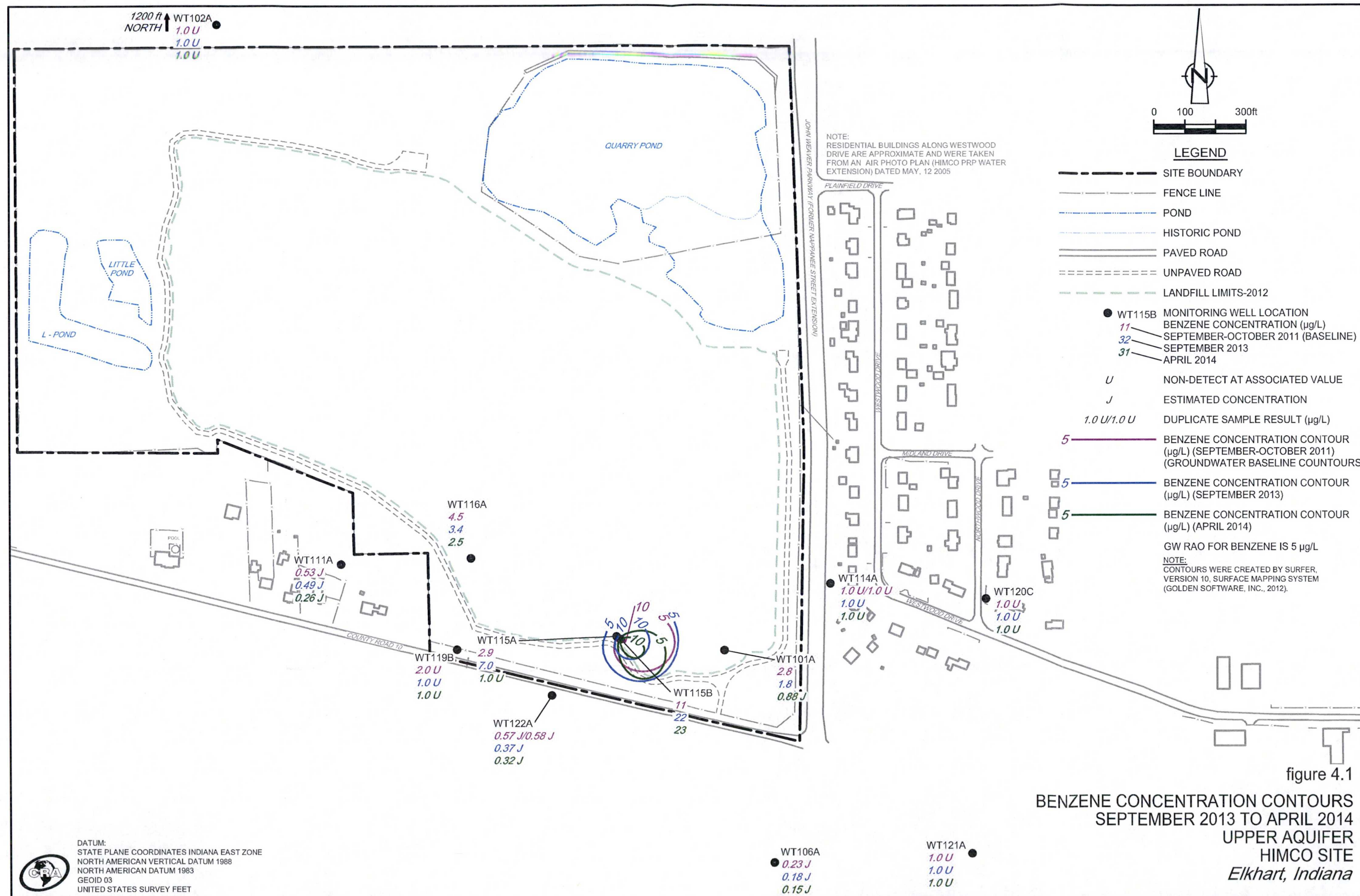


figure 3.4
GROUNDWATER ELEVATION CONTOURS
LOWER AQUIFER - SEPTEMBER 23, 2013
HIMCO SITE
Elkhart, Indiana





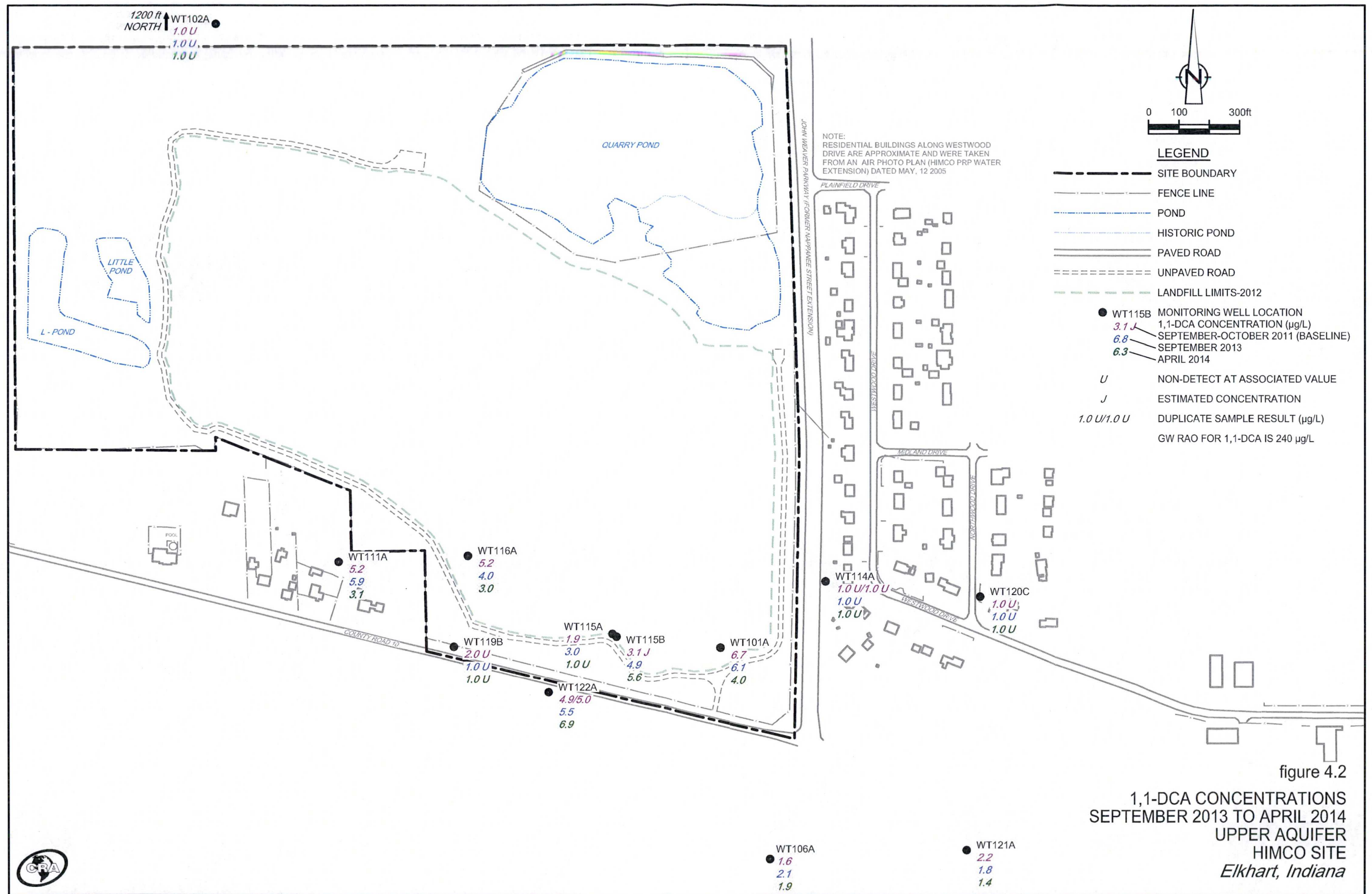
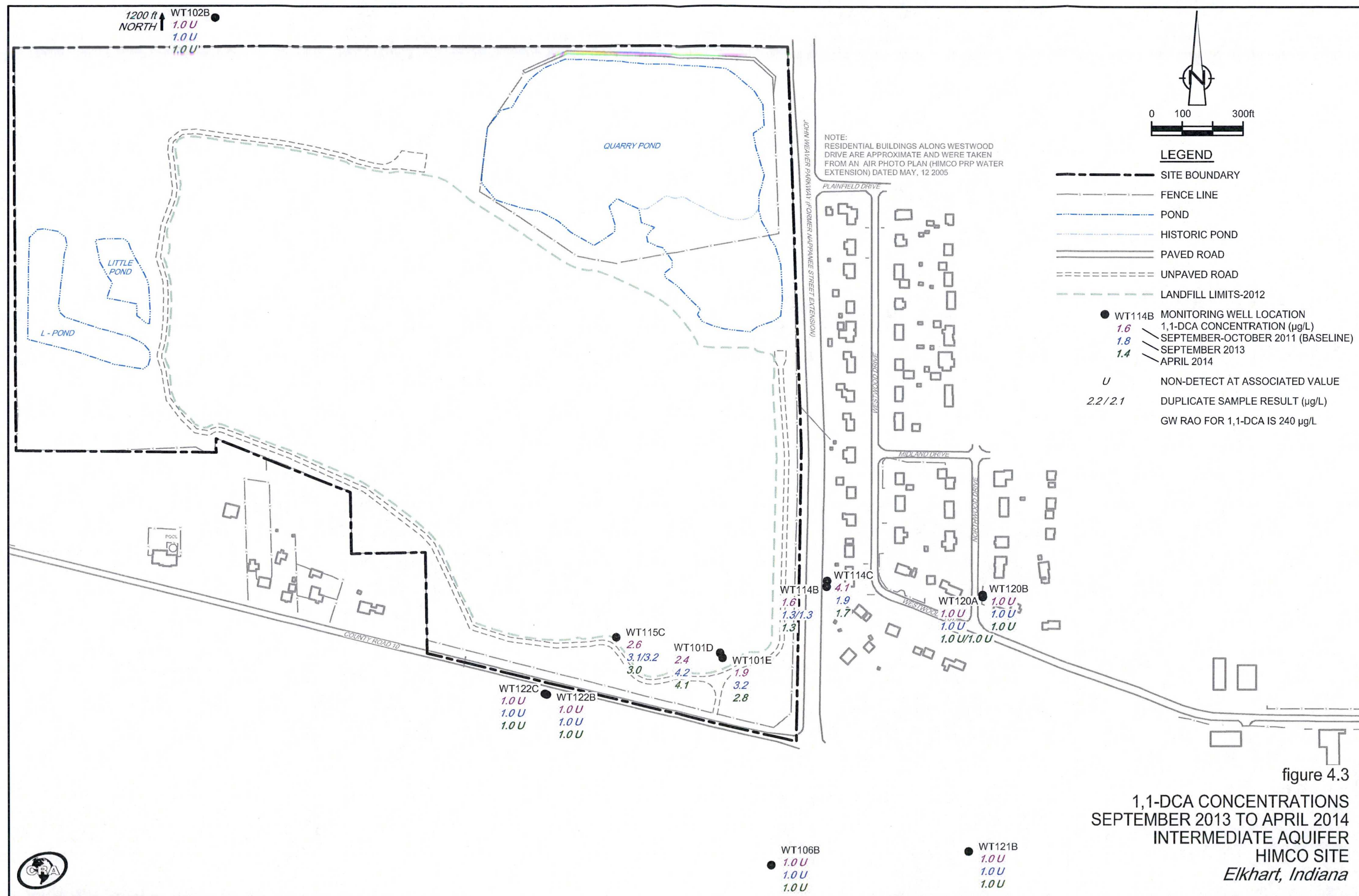


figure 4.2
1,1-DCA CONCENTRATIONS
SEPTEMBER 2013 TO APRIL 2014
UPPER AQUIFER
HIMCO SITE
Elkhart, Indiana





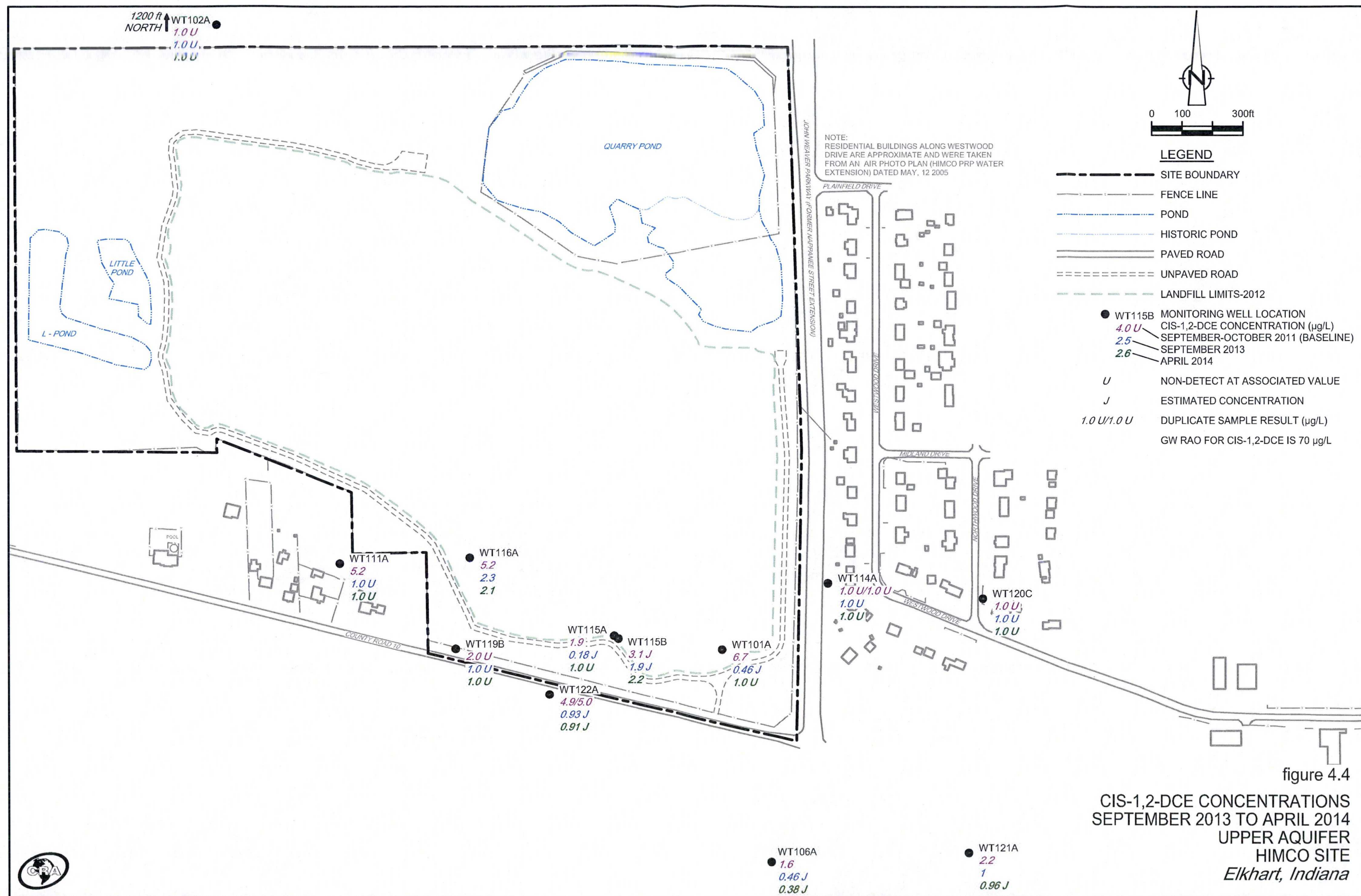


figure 4.4
CIS-1,2-DCE CONCENTRATIONS
SEPTEMBER 2013 TO APRIL 2014
UPPER AQUIFER
HIMCO SITE
Elkhart, Indiana



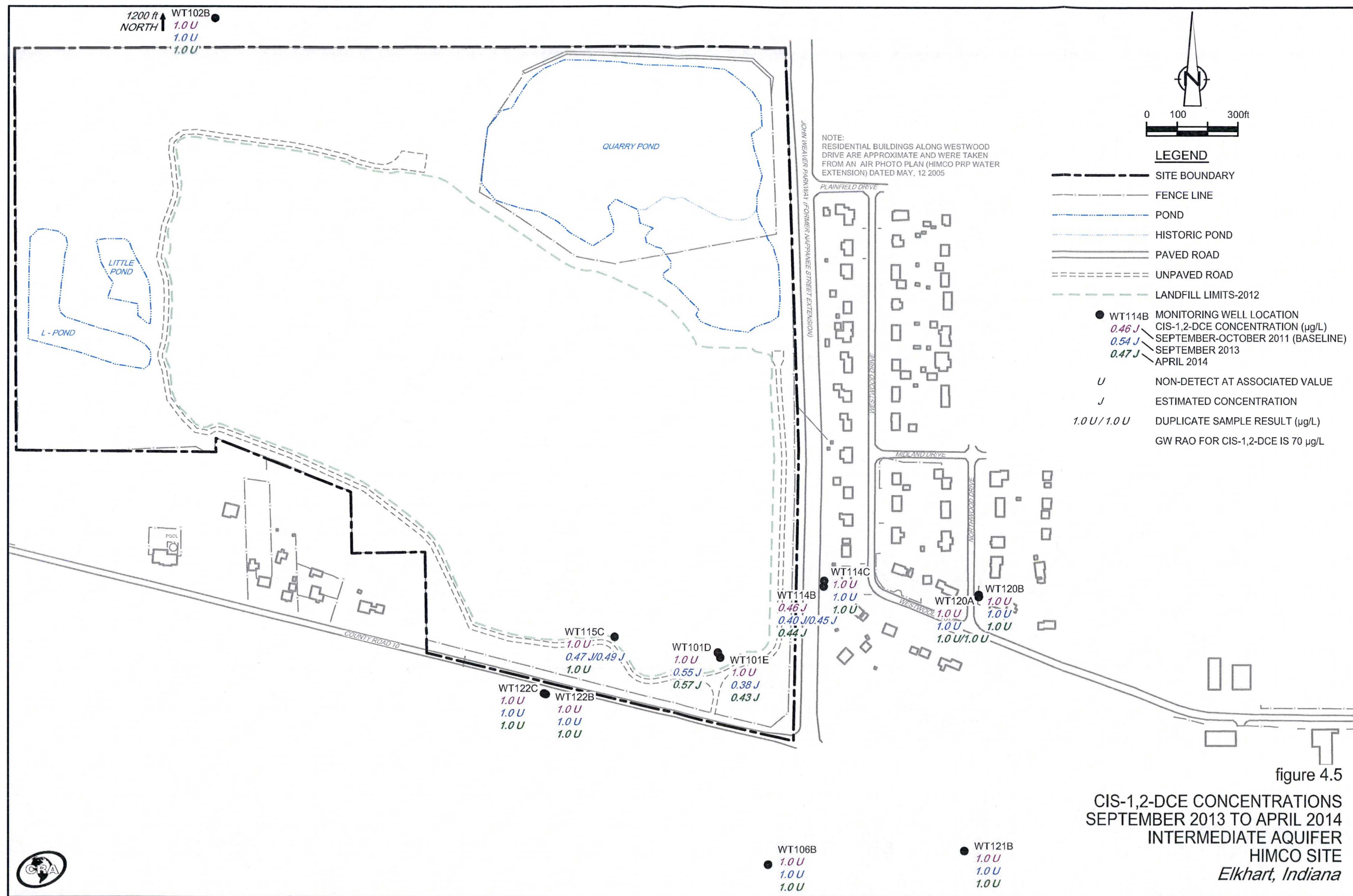
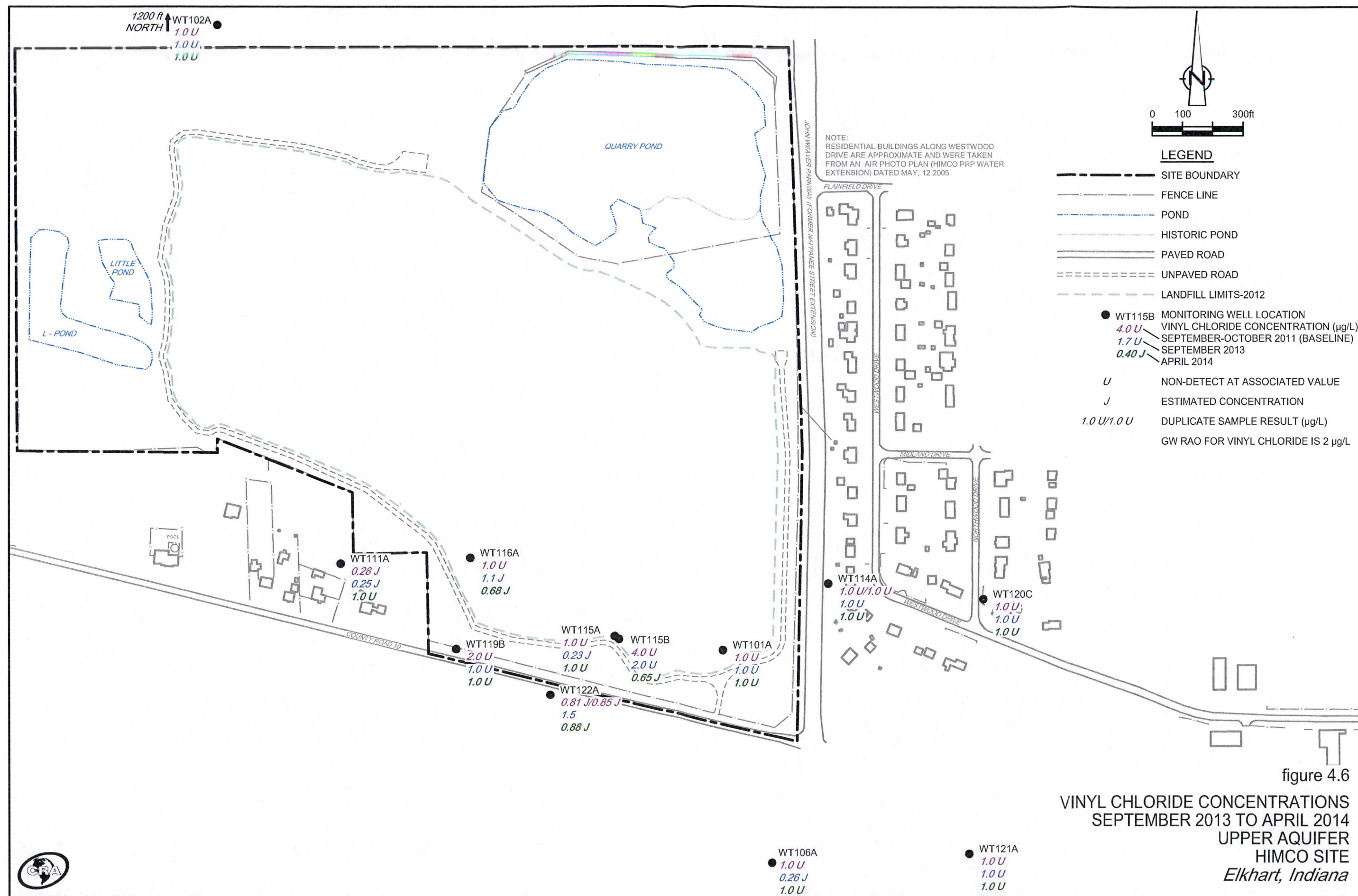
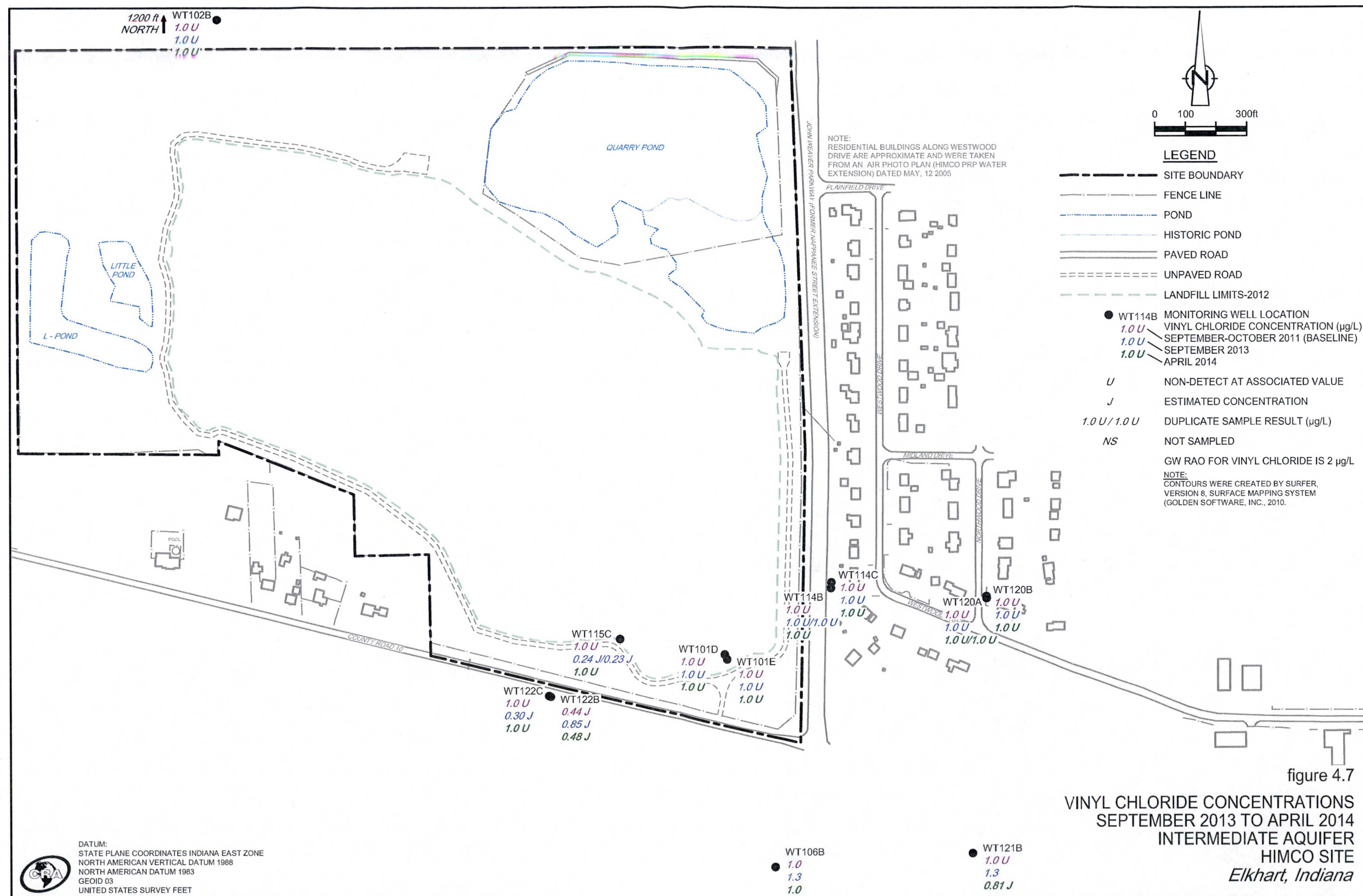
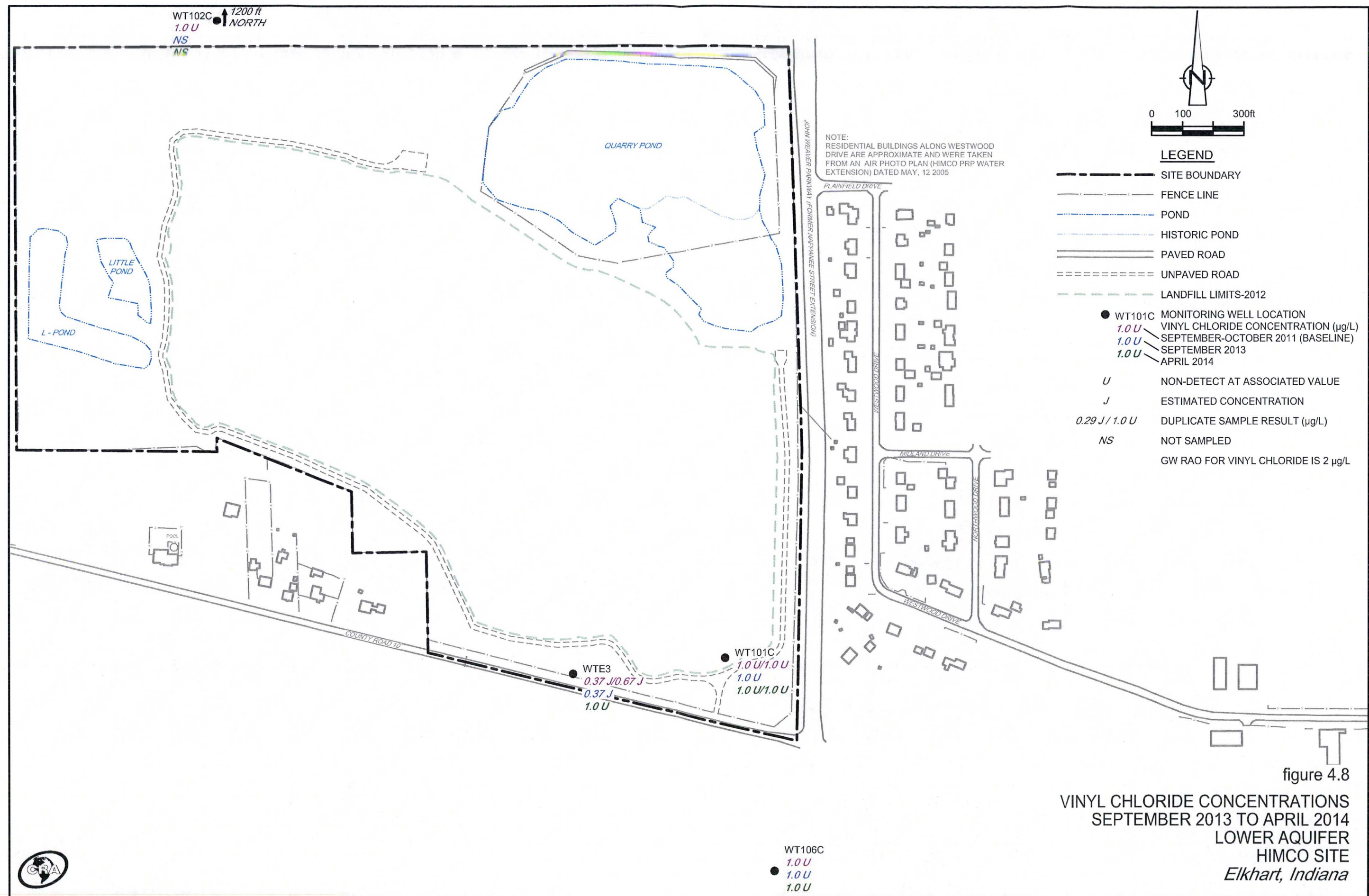


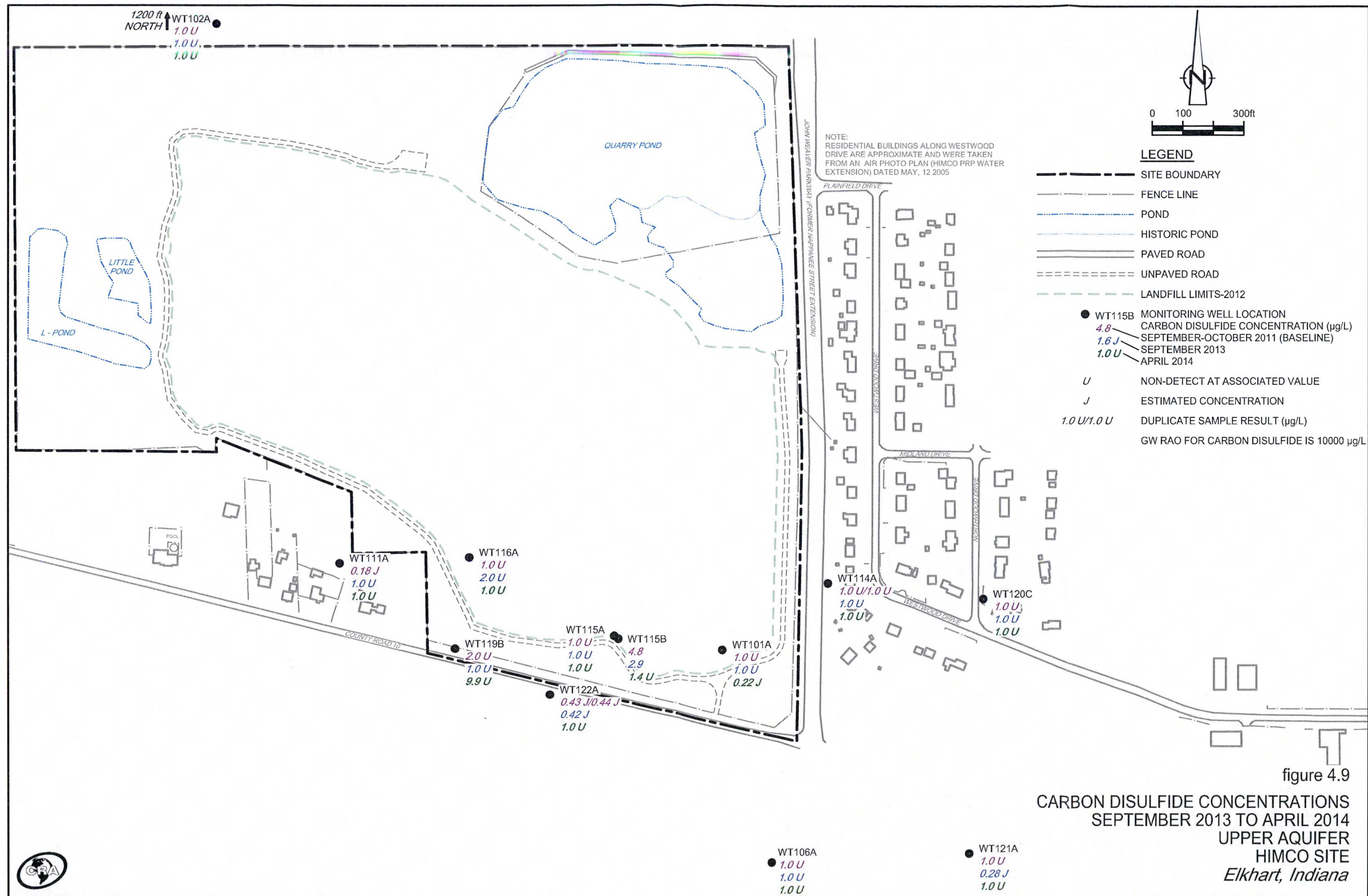
figure 4.5
CIS-1,2-DCE CONCENTRATIONS
SEPTEMBER 2013 TO APRIL 2014
INTERMEDIATE AQUIFER
HIMCO SITE
Elkhart, Indiana











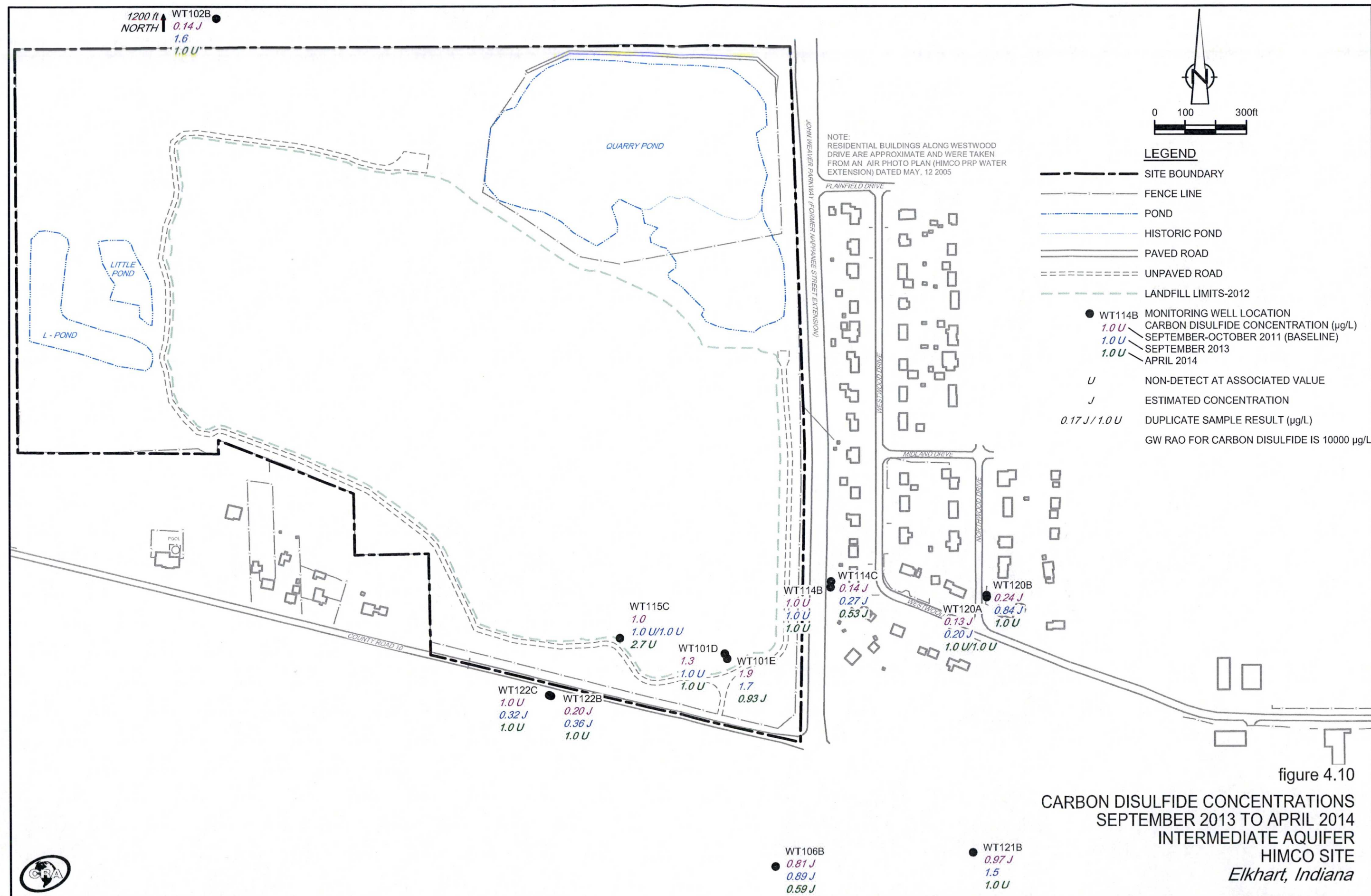
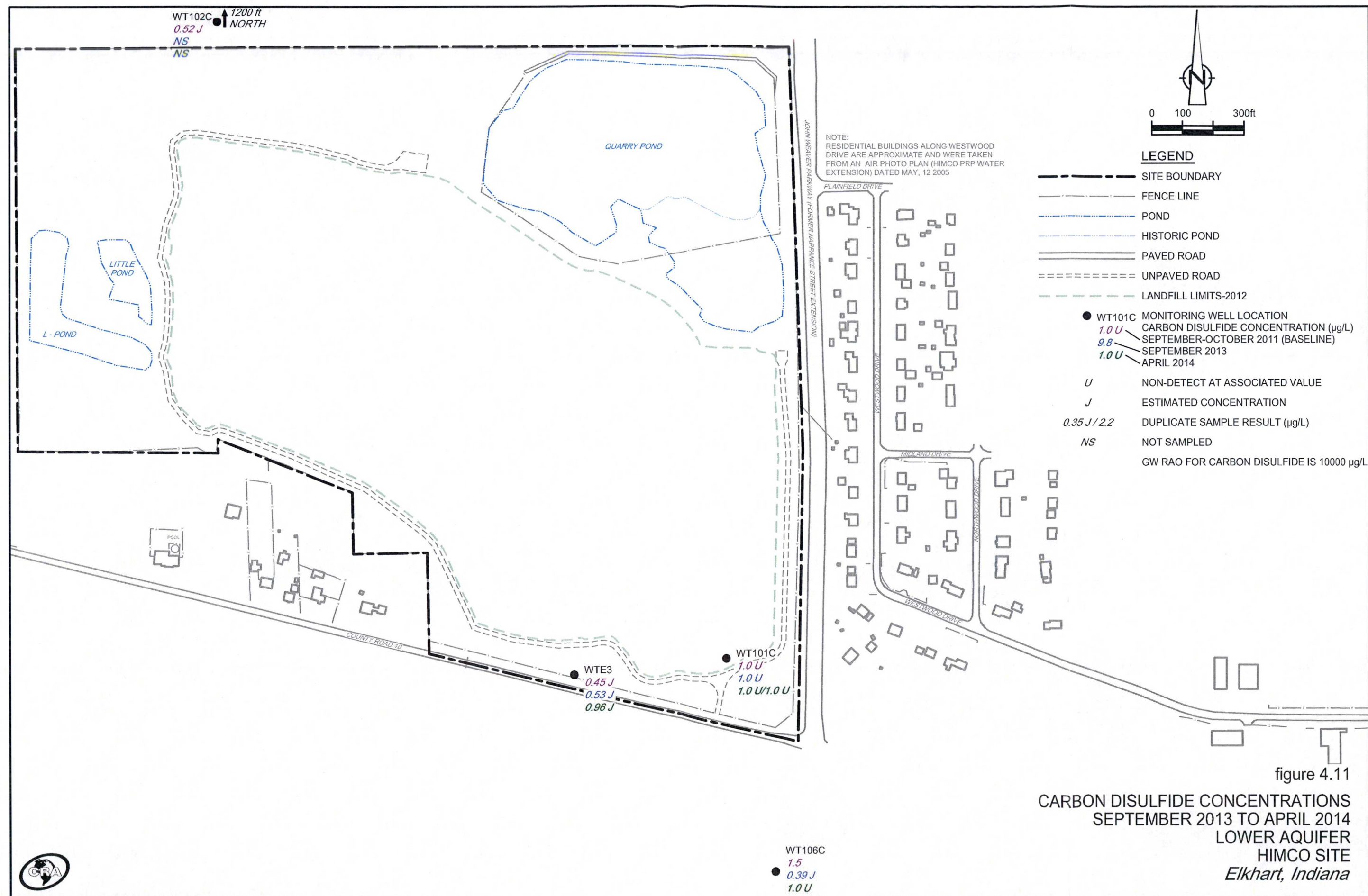
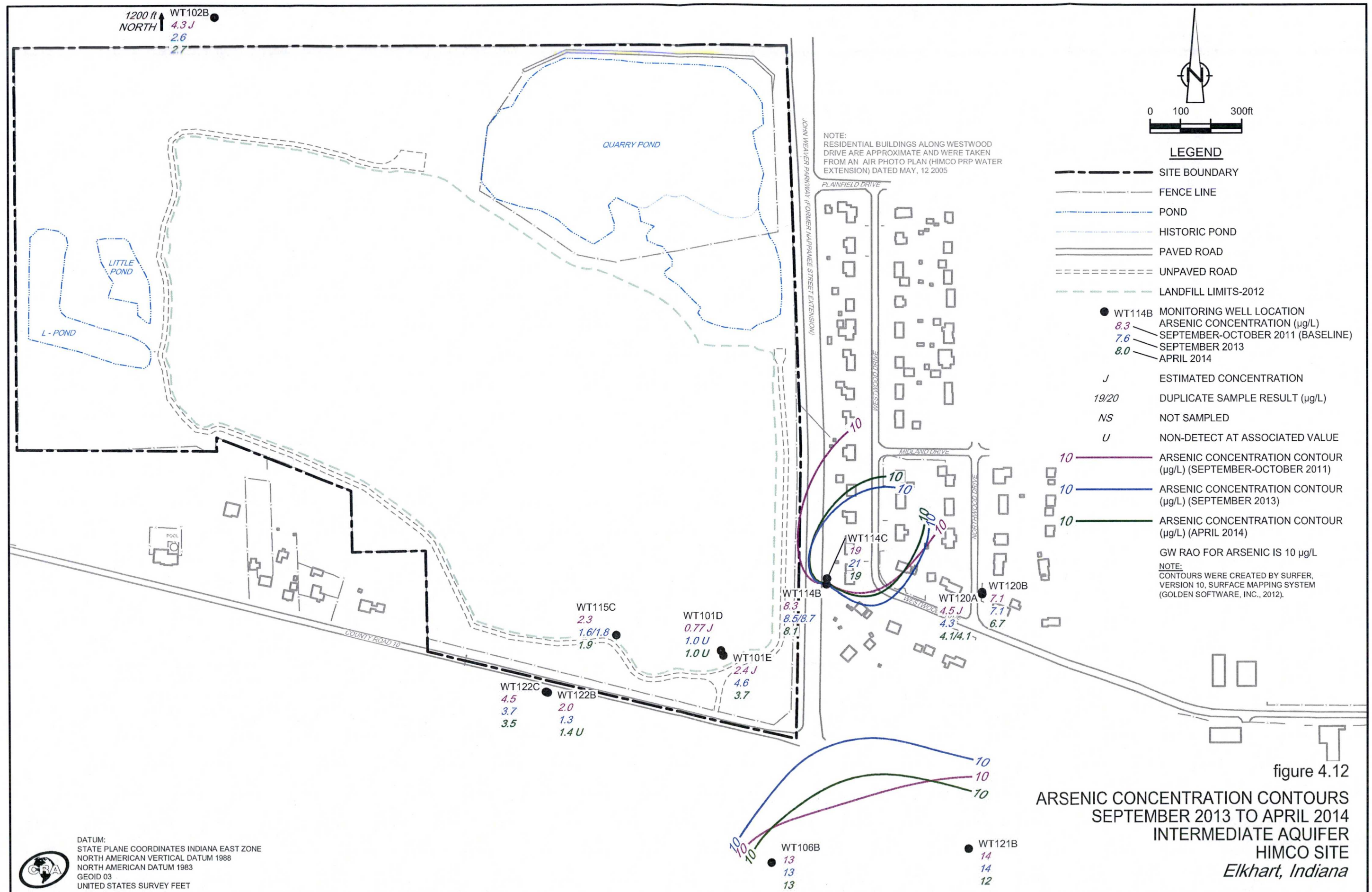
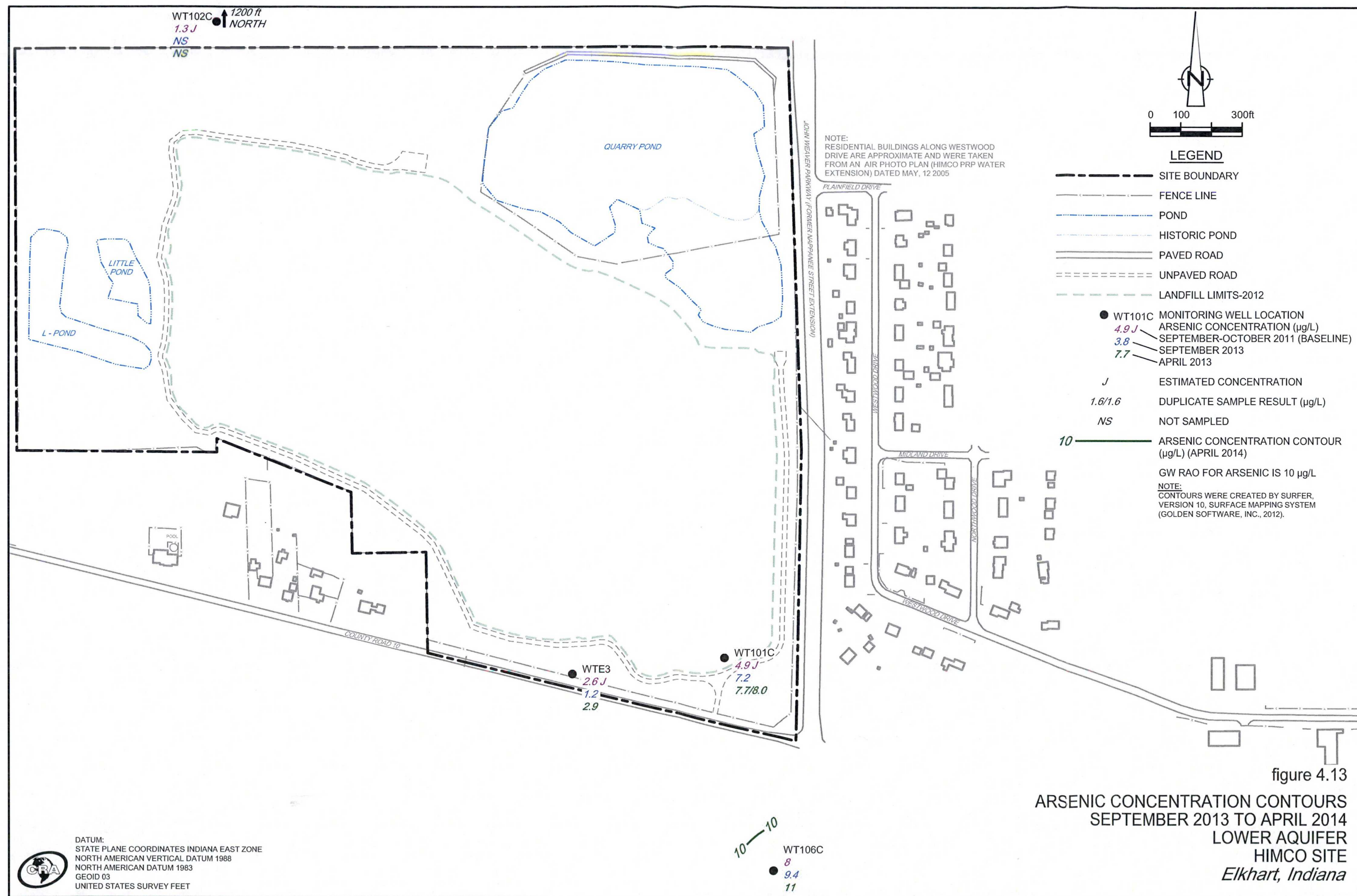
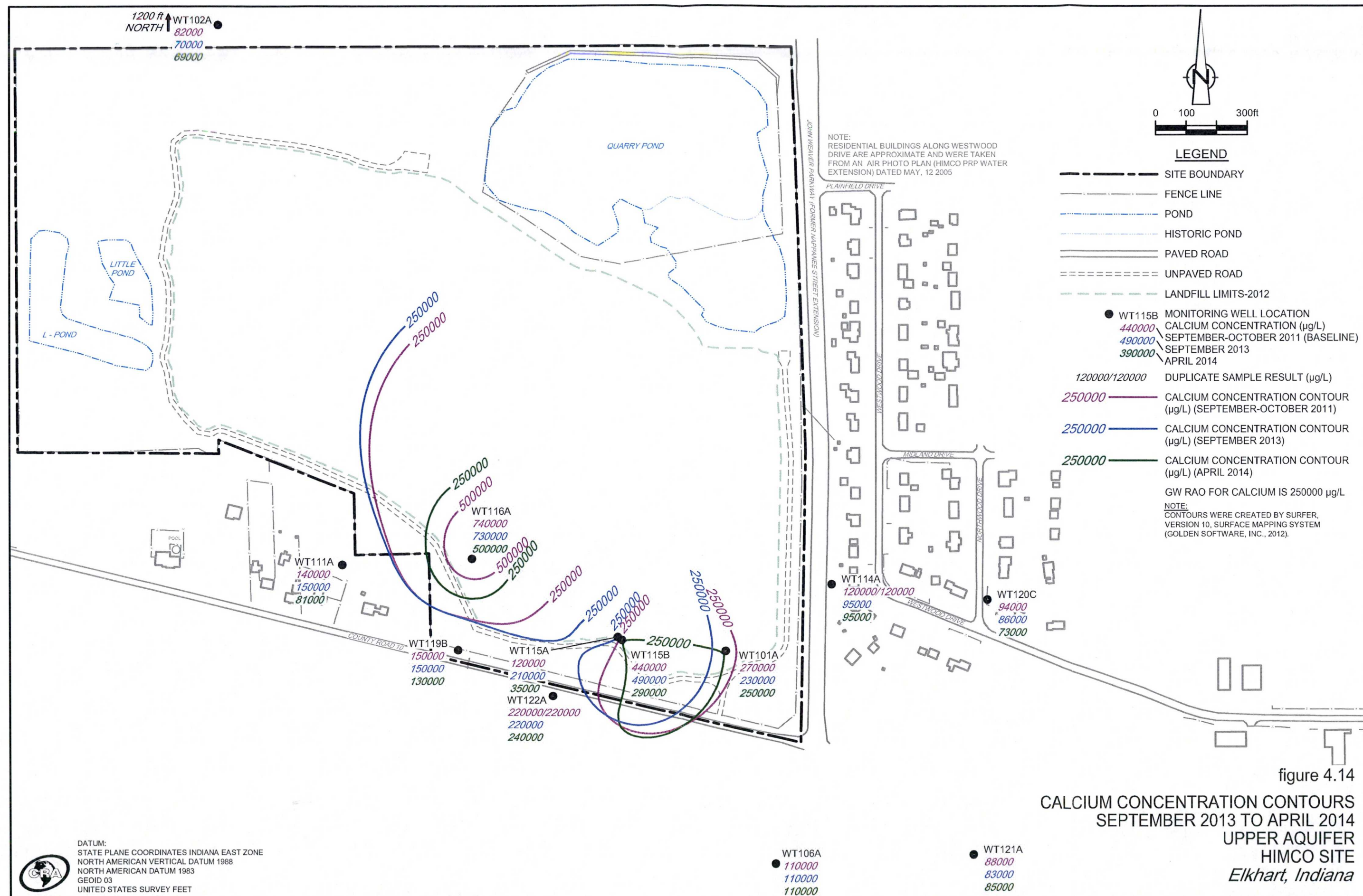


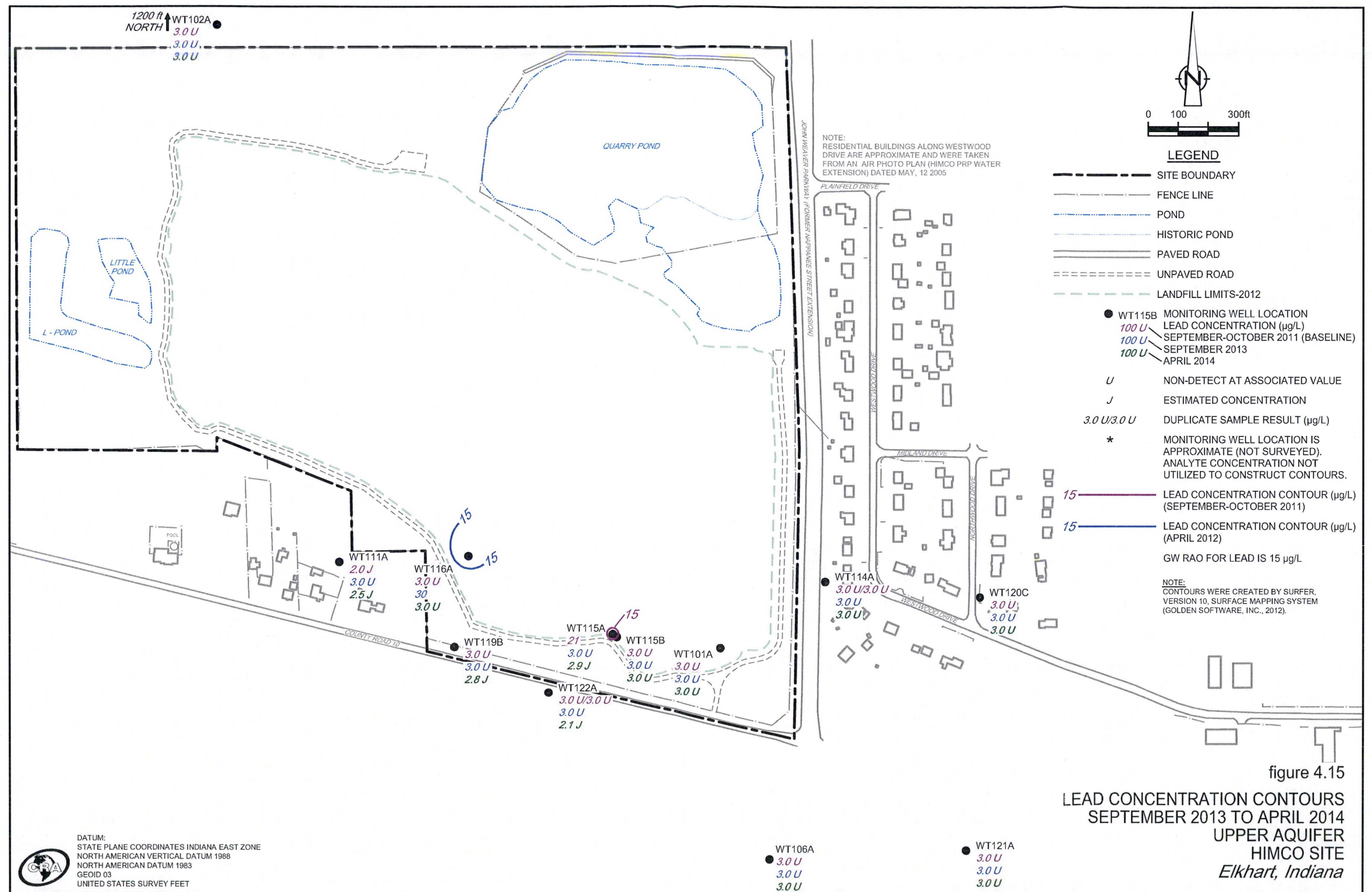
figure 4.10
CARBON DISULFIDE CONCENTRATIONS
SEPTEMBER 2013 TO APRIL 2014
INTERMEDIATE AQUIFER
HIMCO SITE
Elkhart, Indiana











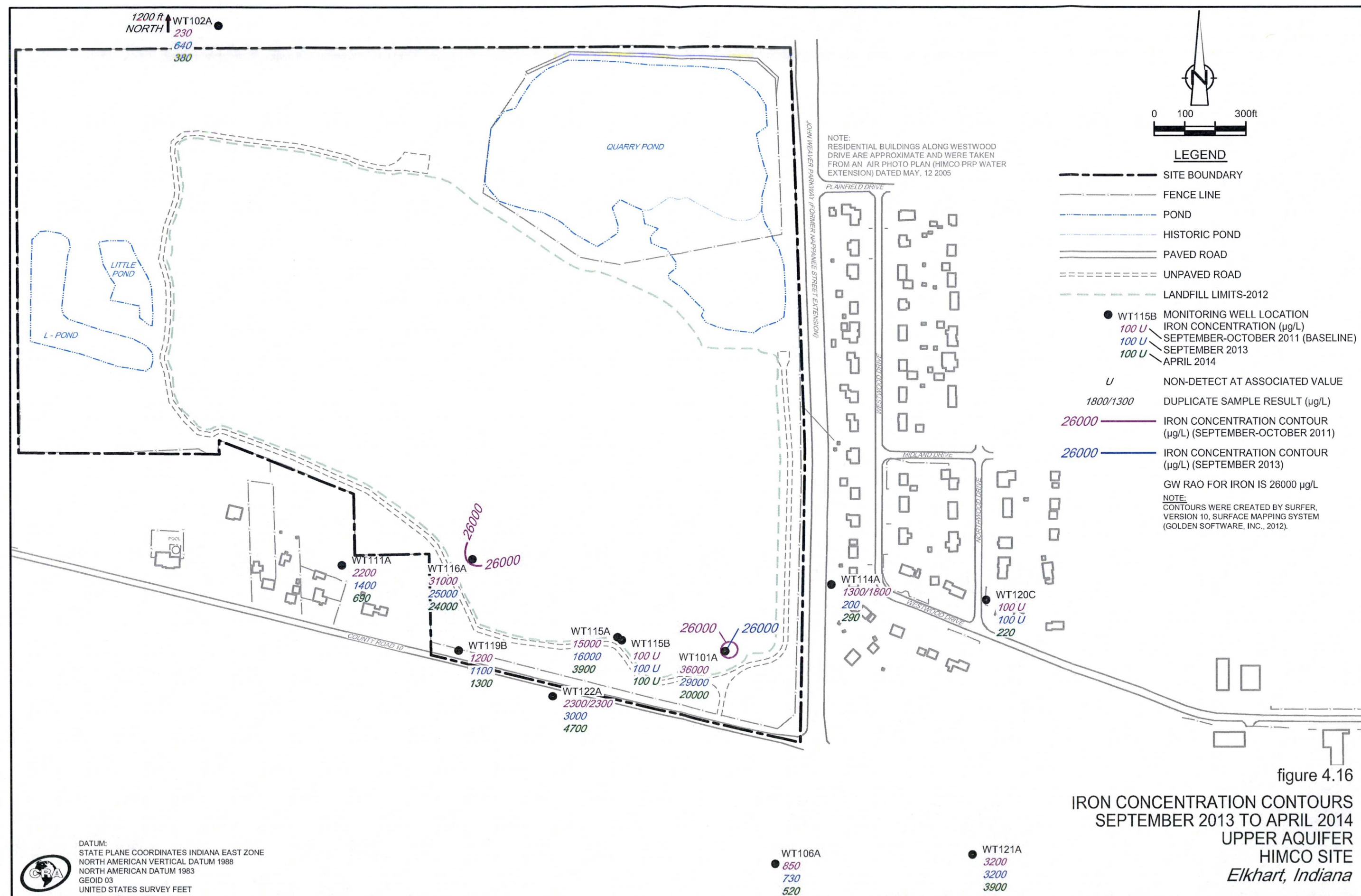
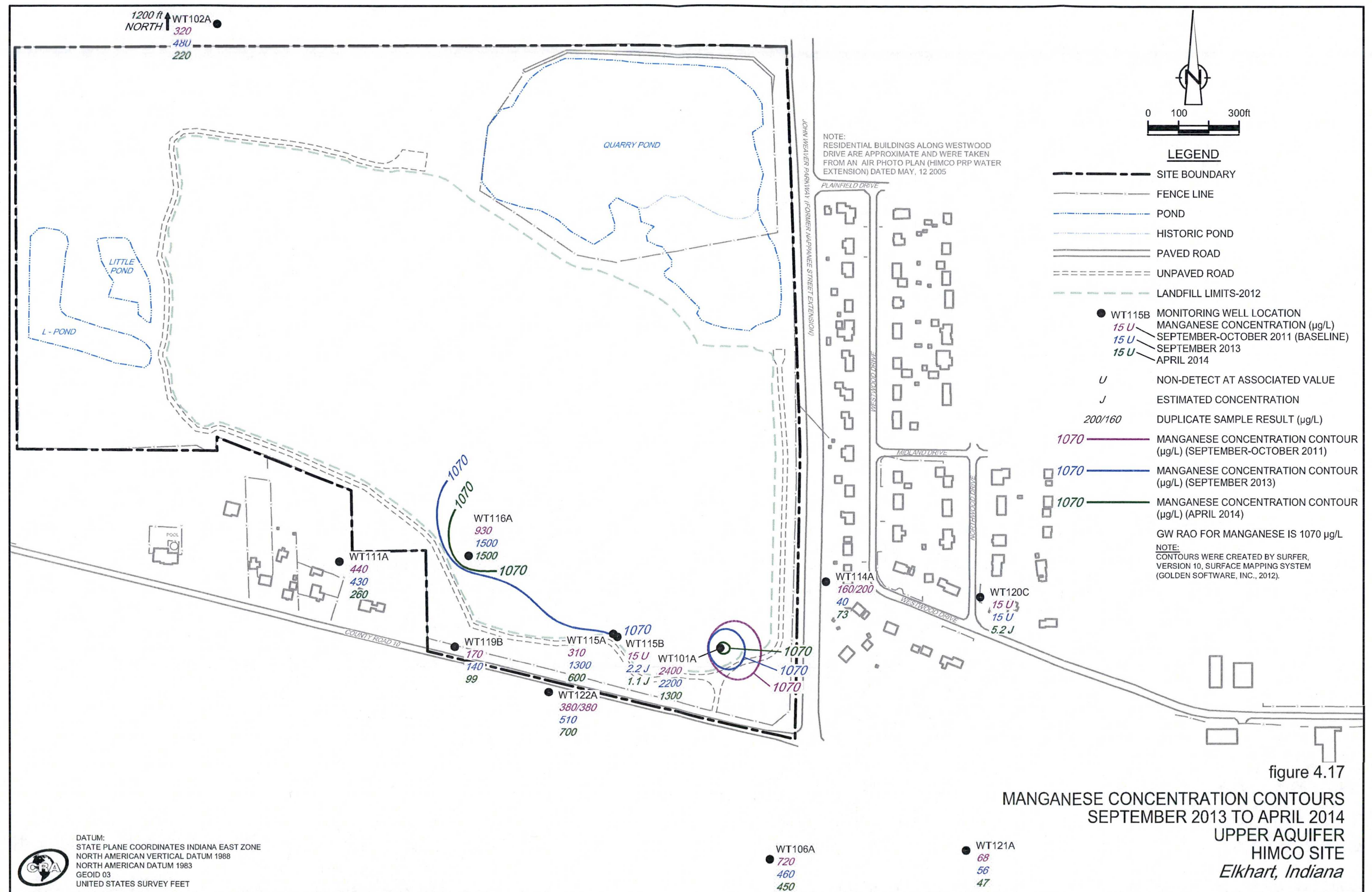
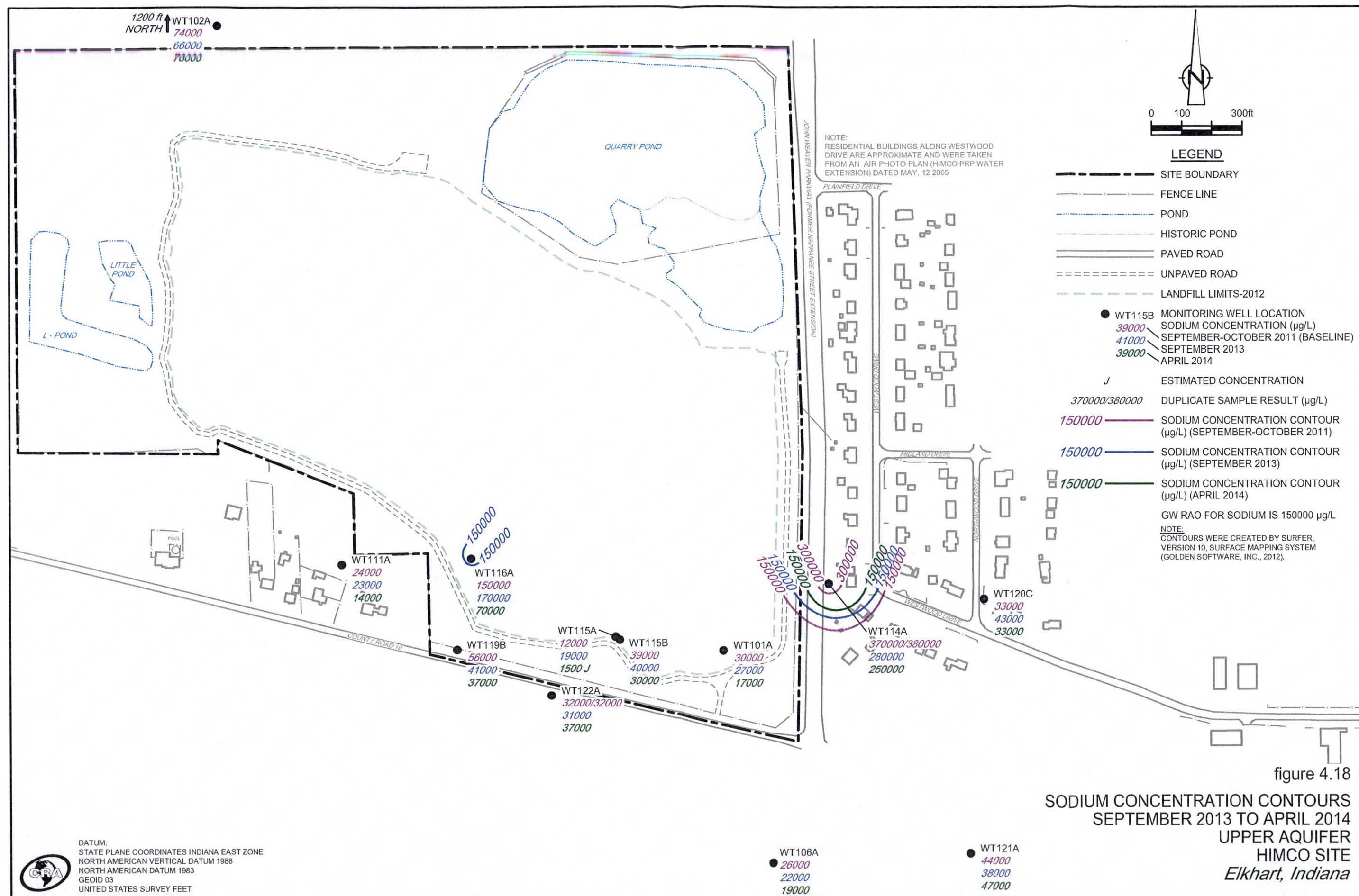


figure 4.16
IRON CONCENTRATION CONTOURS
SEPTEMBER 2013 TO APRIL 2014
UPPER AQUIFER
HIMCO SITE
Elkhart, Indiana





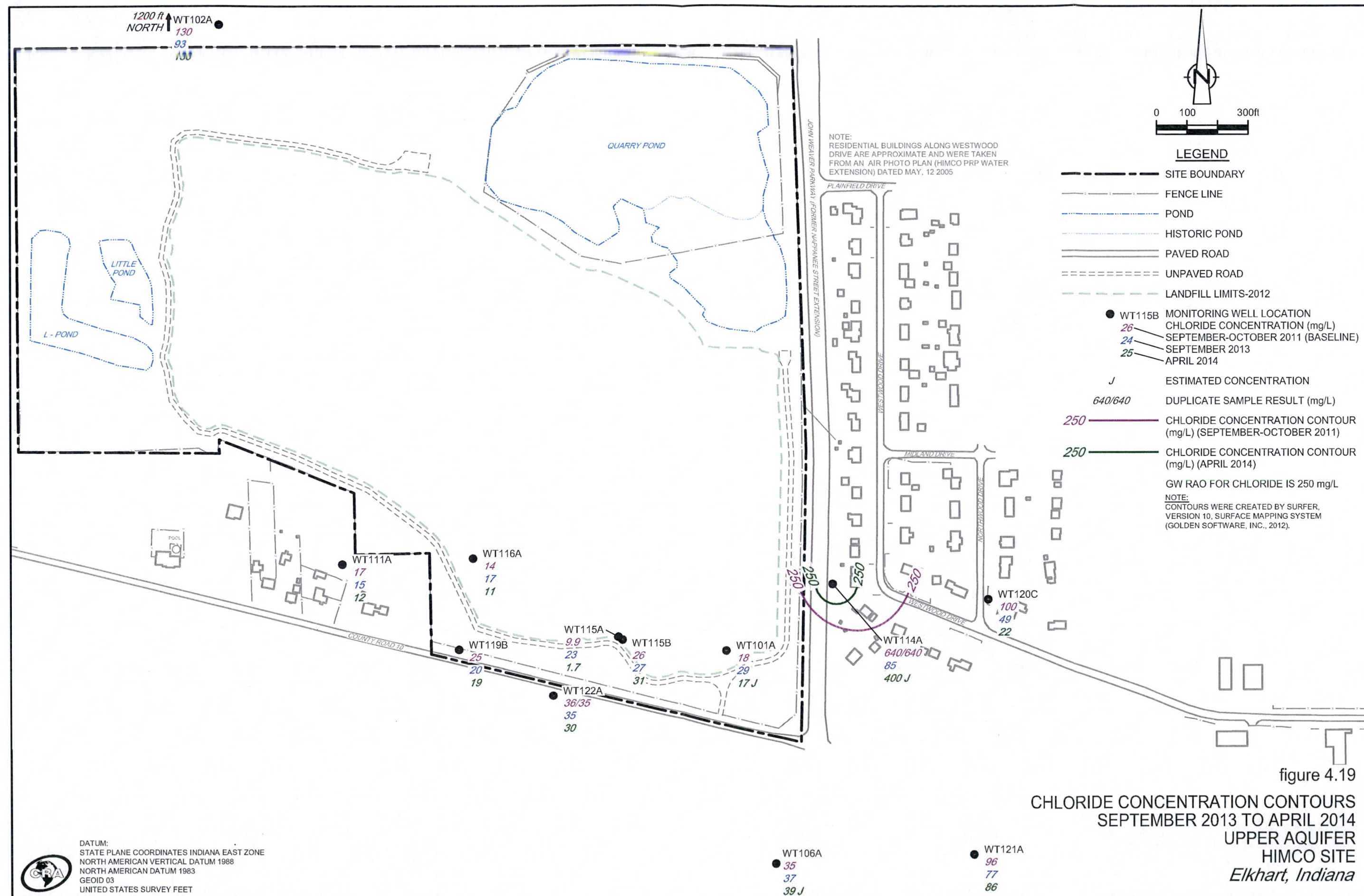


TABLE 2.1

**MONITORING WELL STATUS
HIMCO SITE
ELKHART, INDIANA**

<i>Well ID</i>	<i>Status</i>	<i>Installation Date</i>	<i>Screen Length (ft)</i>	<i>Material</i>	<i>Casing Diameter (inches)</i>	<i>Installed Depth (ft bgs)</i>	<i>Reference Elevation (ft AMSL)</i>	<i>Ground Surface (ft AMSL)</i>	<i>Top of Well Screen (ft AMSL)</i>	<i>Bottom of Well Screen (ft AMSL)</i>	<i>Aquifer Designation</i>	<i>Northing</i>	<i>Easting</i>
UPPER AQUIFER WELLS (760 - 710 ft AMSL)													
WT101A	Functional	11/12/1990	10.00	Stainless Steel	2	16.3	768.69	765.67	759.37	749.37	Upper	2351887.31	235722.28
WT102A	Functional	11/10/1990	10.00	Stainless Steel	2	16.0	768.50	766.19	760.19	750.19	Upper	2355111.73	234055.37
WT103A	Functional	11/11/1990	10.00	Stainless Steel	2	16.0	760.11	757.60	751.60	741.60	Upper	2352799.65	233645.99
WT104A	Functional	11/12/1990	10.00	Stainless Steel	2	16.3	765.50	761.75	755.45	745.45	Upper	2351753.96	234123.98
WT105A	Functional	11/10/1990	10.00	Stainless Steel	2	16.0	762.37	760.07	754.07	744.07	Upper	2351430.59	235211.48
WT106A	Functional	11/9/1990	10.00	Stainless Steel	2	16.3	760.98	758.46	752.16	742.16	Upper	2351184.52	235885.61
WT111A	Functional	9/10/1991	10.00	Stainless Steel	2	20.0	766.00	764.30	754.30	744.30	Upper	2352165.35	234465.00
WT112A	Functional	8/23/1995	10.00	PVC	2	15.4	765.28	763.71	758.31	748.31	Upper	2353912.48	234933.96
WT113A	Functional	8/10/1995	10.00	PVC	2	21.7	771.27	769.32	757.62	747.62	Upper	2353866.00	235898.24
WT114A	Functional	8/21/1995	10.00	PVC	2	22.0	768.62	766.82	754.82	744.82	Upper	2352102.29	236069.62
WT115A	Functional	8/22/1995	10.00	PVC	2	17.4	766.65	762.52	755.12	745.12	Upper	2351932.55	235367.21
WT115B	Functional	2/22/2011	5.00	PVC	2	28.0	766.27	762.38	739.38	734.38	Upper	2351923.36	235380.68
WT116A	Functional	8/17/1995	10.00	PVC	2	12.6	767.21	763.43	760.83	750.83	Upper	2352185.01	234891.12
WT117A	Functional	8/15/1995	10.00	PVC	2	15.5	766.70	764.66	759.16	749.16	Upper	2352463.27	234015.45
WT117C	Functional	5/6/2010	5.00	PVC	2	28.0	766.53	763.74	740.74	735.71	Upper	2352476.42	234005.49
WT119A	Abandoned	10/14/1998	10.00	PVC	2	17.5	763.26				Upper	2351868.88	234816.74
WT119B	Functional	5/10/2010	10.00	PVC	2	18.0	764.87	760.61	752.32	742.32	Upper	2351889.06	234845.27
WT120C	Functional	2/24/2011	5.00	PVC	2	17.0	762.11	762.57	750.57	745.57	Upper	2352052.29	236578.54
WT121A	Functional	2/28/2011	5.00	PVC	2	24.0	758.48	758.87	739.87	734.87	Upper	2351213.71	236533.21
WT122A	Functional	2/23/2011	5.00	PVC	2	25.0	762.58	763.03	743.03	738.03	Upper	2351740.44	235154.91
WT123A	Functional	9/27/2011	10.00	PVC	2	17.0			NOT SURVEYED		Upper	NOT SURVEYED	
WT124A	Functional	9/27/2011	10.00	PVC	2	22.0			NOT SURVEYED		Upper	NOT SURVEYED	
WTB2	Functional	11/3/1977	10.00	Black Steel	2	11.9	762.70	760.82	758.92	748.92	Upper	2353858.07	234068.99
WTO1	Destroyed	5/1/1979	5.00	PVC	2	30.0			NOT SURVEYED		Upper	2352650.39	235975.90
WTO2	Functional	5/5/2010	5.00	PVC	2	37.0	765.95	763.15	731.15	726.15	Upper	2352659.27	235970.66

TABLE 2.1
MONITORING WELL STATUS
HIMCO SITE
ELKHART, INDIANA

<i>Well ID</i>	<i>Status</i>	<i>Installation Date</i>	<i>Screen Length (ft)</i>	<i>Material</i>	<i>Casing Diameter (inches)</i>	<i>Installed Depth (ft bgs)</i>	<i>Reference Elevation (ft AMSL)</i>	<i>Ground Surface (ft AMSL)</i>	<i>Top of Well Screen (ft AMSL)</i>	<i>Bottom of Well Screen (ft AMSL)</i>	<i>Aquifer Designation</i>	<i>Northing</i>	<i>Easting</i>
INTERMEDIATE AQUIFER WELLS (710 - 610 ft AMSL)													
WT101B	Functional	12/14/1990	5.00	Stainless Steel	2	98.0	768.95	764.89	671.89	666.89	Intermediate	2351874.25	235726.99
WT101D	Functional	5/3/2010	5.00	PVC	2	63.0	768.81	765.27	703.63	698.30	Intermediate	2351877.98	235718.51
WT101E	Functional	5/4/2010	5.00	PVC	2	123.0	768.68	764.30	643.52	638.52	Intermediate	2351862.22	235726.63
WT102B	Functional	12/2/1990	5.00	Stainless Steel	2	65.4	768.22	765.87	705.47	700.47	Intermediate	2355133.90	234051.70
WT106B	Functional	5/10/2010	5.00	PVC	2	115.0	761.50	758.71	648.71	643.71	Intermediate	2351175.05	235885.57
WT112B	Functional	8/23/1995	5.00	PVC	2	59.4	765.54	763.55	709.15	704.15	Intermediate	2353912.39	234943.21
WT113B	Functional	8/10/1995	5.00	PVC	2	67.2	771.47	769.52	707.32	702.32	Intermediate	2353861.31	235888.26
WT114B	Functional	8/22/1995	5.00	PVC	2	65.3	768.77	766.95	706.65	701.65	Intermediate	2352092.21	236067.36
WT114C	Functional	5/11/2010	5.00	PVC	2	127.0	768.87	766.14	644.14	639.14	Intermediate	2352110.84	236068.83
WT115C	Functional	2/22/2011	5.00	PVC	2	68.0	766.03	762.37	699.37	694.37	Intermediate	2351928.83	235375.65
WT116B	Functional	8/17/1995	5.00	PVC	2	58.4	766.85	762.83	709.43	704.43	Intermediate	2352189.86	234881.45
WT117B	Functional	8/14/1995	5.00	PVC	2	61.3	766.13	764.20	707.90	702.90	Intermediate	2352463.66	234002.76
WT117D	Functional	5/6/2010	5.00	PVC	2	112.0	766.58	763.90	656.90	651.90	Intermediate	2352476.61	234013.25
WT118B	Functional	8/18/1995	5.00	PVC	2	62.5	765.99	763.56	706.06	701.06	Intermediate	2352178.19	234466.70
WT120A	Functional	5/12/2010	5.00	PVC	2	73.0	762.19	762.43	694.43	689.43	Intermediate	2352059.17	236578.58
WT120B	Functional	5/12/2010	5.00	PVC	2	117.0	762.18	762.58	650.58	645.58	Intermediate	2352065.60	236578.16
WT121B	Functional	2/28/2011	5.00	PVC	2	63.0	758.46	758.74	700.74	695.74	Intermediate	2351219.53	236532.99
WT122B	Functional	2/23/2011	5.00	PVC	2	63.0	762.75	762.98	704.98	699.98	Intermediate	2351740.49	235148.61
WT122C	Functional	2/24/2011	5.00	PVC	2	103.0	762.63	762.97	664.97	659.97	Intermediate	2351743.38	235142.97
WTB3	Functional	10/17/1977	10.00	PVC	5	135.0	762.74	760.62	635.62	625.62	Intermediate	2353858.37	234077.13
WTE1	Functional	10/11/1977	10.00	PVC	5	81.0	766.11	762.50	691.50	681.50	Intermediate	2351825.22	235236.59
WTO3	Functional	5/5/2010	5.00	PVC	2	92.0	765.65	763.00	676.00	671.00	Intermediate	2352652.85	235969.84
WTO4	Functional	5/4/2010	5.00	PVC	2	132.0	765.29	762.77	635.77	630.77	Intermediate	2352646.28	235971.31

TABLE 2.1
MONITORING WELL STATUS
HIMCO SITE
ELKHART, INDIANA

Well ID	Status	Installation Date	Screen Length (ft)	Material	Casing Diameter (inches)	Installed Depth (ft bgs)	Reference Elevation (ft AMSL)	Ground Surface (ft AMSL)	Top of Well Screen (ft AMSL)	Bottom of Well Screen (ft AMSL)	Aquifer Designation	Northing	Easting
LOWER AQUIFER WELLS (610 - 275 ft AMSL)													
WT101C	Functional	12/12/1990	5.00	Stainless Steel	2	165.0	768.53	764.25	604.25	599.25	Lower	2351860.52	235732.51
WT102C	Functional	12/1/1990	5.00	Stainless Steel	2	159.5	768.65	765.94	611.44	606.44	Lower	2355123.61	234053.78
WT106C	Functional	3/30/2011	5.00	PVC	2	208.0	757.80	758.06	555.06	550.06	Lower	2351154.95	235894.48
WTB1	Functional	10/6/1977	6.00	PVC	5	473.0	763.06	761.58	294.58	288.58	Lower	2353857.39	234061.79
WTB4	Functional	10/7/1977	5.00	PVC	5	173.0	761.77	760.67	592.67	587.67	Lower	2353855.62	234084.92
WTE3	Functional	10/11/1977	5.00	PVC	5	176.0	765.29	762.22	591.22	586.22	Lower	2351807.07	235231.75

Notes:

ft bgs feet below ground surface
ft AMSL feet above mean sea level
PVC polyvinyl chloride

TABLE 2.2

GROUNDWATER MONITORING PROGRAM
HIMCO SITE
ELKHART, INDIANA

UPPER AQUIFER WELLS*Detection Monitoring Wells*

WT101A
WT115A
WT115B
WT116A

Compliance Monitoring Wells

WT106A
WT111A
WT114A
WT115C
WT119B
WT120C
WT121A
WT122A

Background Monitoring Well

WT102A

INTERMEDIATE AQUIFER WELLS*Detection Monitoring Wells*

WT106B
WT114C
WT120B

Compliance Monitoring Wells

WT101D
WT101E
WT114B
WT120A
WT121B
WT122B
WT122C

Background Monitoring Well

WT102B

LOWER AQUIFER WELLS*Compliance Monitoring Wells*

WT101C
WT106C
WTE3

TABLE 2.3

GROUNDWATER MONITORING PROGRAM PARAMETER LIST
HIMCO SITE
ELKHART, INDIANA

Volatile Organic Compounds (VOCs)

Benzene
1,1-Dichloroethane
cis-1,2-Dichloroethene
Vinyl chloride
Carbon disulfide

Semi-volatile Organic Compounds (SVOCs)

bis-(2-ethylhexyl)phthalate

Metals

Aluminum
Arsenic
Barium
Beryllium
Calcium
Iron
Lead
Manganese
Mercury
Sodium

General Chemistry

Chloride
Sulfate

TABLE 4.1

GROUNDWATER ANALYTICAL RESULTS SUMMARY - VOCs & SVOCs
HIMCO SITE
ELKHART, INDIANA

<i>Parameters</i>	<i>Units</i>	<i>GW RAOs</i>	<i>Number of Samples</i>	<i>Number of Detections</i>	<i>Percentage of Detections</i>	<i>Number of Exceedances</i>	<i>Percentage of Exceedances</i>	<i>Minimum Detection</i>	<i>Maximum Detection</i>
<i>Volatile Organic Compounds (VOCs)</i>									
Benzene	µg/L	5	58	13	22.4%	3	5.6%	0.13 J	23
1,1-Dichloroethane	µg/L	240	58	27	46.6%	0	0.0%	1.3	6.9
cis-1,2-Dichloroethene	µg/L	70	58	21	36.2%	0	0.0%	0.18 J	2.3
Vinyl chloride	µg/L	2	58	18	31.0%	0	0.0%	0.23 J	1.5
Carbon disulfide	µg/L	10000	58	19	32.8%	0	0.0%	0.20 J	2.9
<i>Semi-volatile Organic Compounds (SVOCs)</i>									
bis(2-ethylhexyl)phthalate	µg/L	6	58	0	0.0%	0	0.0%	Not Detected	

Notes:

µg/L Micrograms per liter
 GW RAOs Groundwater Remedial Action Objectives
 J Concentration is estimated

TABLE 4.2
GROUNDWATER ANALYTICAL RESULTS SUMMARY- METALS- UPPER AQUIFER
HIMCO SITE
ELKHART, INDIANA

<i>Parameters</i>	<i>Units</i>	<i>Primary MCL</i>	<i>Secondary MCL</i>	<i>RDA</i>	<i>Tapwater RSL</i>	<i>BV</i>	<i>GW RAO</i>	<i>Number of Samples</i>	<i>Number of Detections</i>	<i>Percentage of Detections</i>	<i>Number of Exceedances</i>	<i>Percentage of Exceedances</i>	<i>Maximum Detection</i>	<i>Minimum Detection</i>
Metals														
Aluminum	µg/L	-	50	-	37000	651	37000	24	21	87.50%	0	0.00%	720	13
Arsenic	µg/L	10	-	-	0.045	2 U	10	24	15	62.50%	0	0.00%	8.6	0.57
Barium	µg/L	2000	-	-	7300	200 U	2000	24	24	100.00%	0	0.00%	300	18
Beryllium	µg/L	4	-	-	73	5.0 U	5.0 U	24	0	0.00%	N/A	N/A	N/A	N/A
Calcium	µg/L	-	-	250000	-	242000	250000	24	24	100.00%	4	16.67%	730000	35000
Iron	µg/L	-	300	1000	26000	7100	26000	24	21	87.50%	1	4.17%	29000	200
Lead	µg/L	15	-	-	-	3.0 U	15	24	5	20.83%	1	4.17%	30	2.1
Manganese	µg/L	-	50	-	880	1070	1070	24	23	95.83%	5	20.83%	2200	1.1
Mercury	µg/L	2	-	-	0.57	0.2 U	2	24	0	0.00%	N/A	N/A	N/A	N/A
Sodium	µg/L	-	-	150000	-	102000	150000	24	24	100.00%	3	12.50%	280000	1500
General Chemistry														
Chloride	mg/L	-	250	-	-	228	250	24	24	100.00%	1	4.17%	400	1.7
Sulfate	mg/L	-	250	-	-	637	637	24	24	100.00%	0	0.00%	400	8.2

Notes:

mg /L Milligram per liter
µg/L Micrograms per liter
U Not detected. The associated numerical value is the reporting detection limit.
J Concentration is estimated.
N/A Not available
- Not applicable
MCL Maximum Contaminant Level
RDA Recommended Daily Allowance
RSL Regional Screening Level
BV Background Value
GW RAO Groundwater Remedial Action Objective

TABLE 4.3

GROUNDWATER ANALYTICAL RESULTS SUMMARY- METALS- INTERMEDIATE AQUIFER
HIMCO SITE
ELKHART, INDIANA

Parameters	Units	Primary MCL	Secondary MCL	RDA	RSL Tapwater	BV	GW RAO	Number of Samples	Number of Detections	Percentage of Detections	Number of Exceedances	Percentage of Exceedances	Maximum Detection	Minimum Detection
Metals														
Aluminum	µg/L	-	50	-	37000	161	37000	27	8	29.63%	0	0.0%	120	9.5
Arsenic	µg/L	10	-	-	0.045	7.05	10	27	24	88.89%	6	22.2%	21	1.3
Barium	µg/L	2000	-	-	7300	200 U	2000	27	27	100.00%	0	0.0%	450	39
Beryllium	µg/L	4	-	-	73	5.0 U	5.0 U	27	0	0.00%	N/A	N/A	N/A	N/A
Calcium	µg/L	-	-	250000	-	85800	250000	27	27	100.00%	0	0.0%	140000	65000
Iron	µg/L	-	300	1000	26000	2170	26000	27	27	100.00%	0	0.0%	10000	430
Lead	µg/L	15	-	-	-	3.0 U	15	27	1	3.70%	0	0.0%	2.3	2.3
Manganese	µg/L	-	50	-	880	170	880	27	27	100.00%	0	0.0%	220	30
Mercury	µg/L	2	-	-	0.57	0.2 U	2	27	1	3.70%	0	0.0%	0.16	0.16
Sodium	µg/L	-	-	150000	-	31600	150000	27	27	100.00%	0	0.0%	56000	14000
General Chemistry														
Chloride	mg/L	-	250	-	-	54.5	250	27	27	100.00%	0	0.0%	84	4.7
Sulfate	mg/L	-	250	-	-	370	370	27	27	100.00%	0	0.0%	170	25

Notes:

mg/L	Milligram per liter
µg/L	Micrograms per liter
U	Not detected. The associated numerical value is the reporting detection limit.
J	Concentration is estimated.
N/A	Not available
-	Not applicable
MCL	Maximum Contaminant Level
RDA	Recommended Daily Allowance
RSL	Regional Screening Level
BV	Background Value
GW RAO	Groundwater Remedial Action Objective

TABLE 4.4

GROUNDWATER ANALYTICAL RESULTS SUMMARY- METALS- LOWER AQUIFER
HIMCO SITE
ELKHART, INDIANA

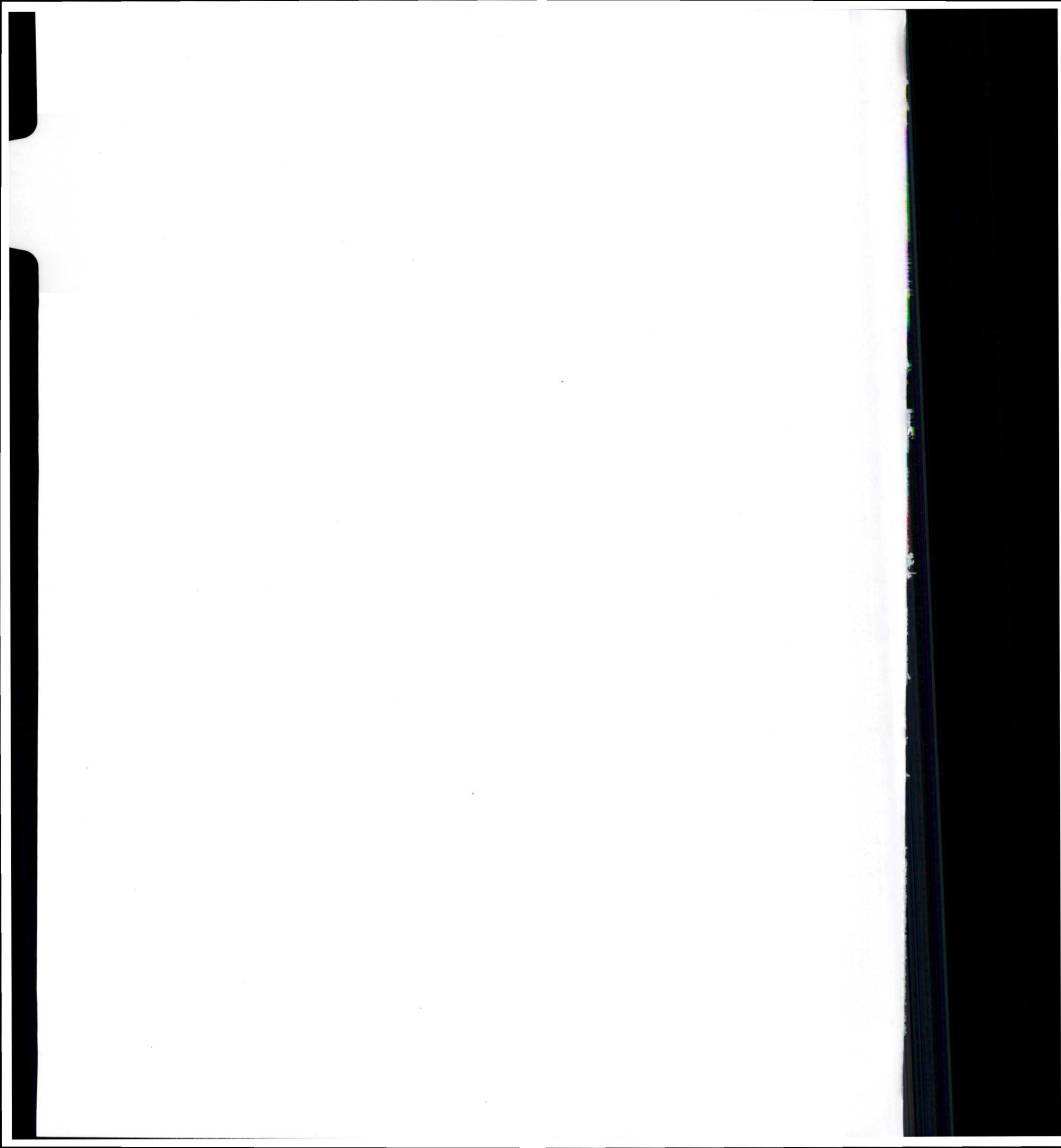
Parameters	Units	Primary MCL	Secondary MCL	RDA	RSL Tapwater	BV	GW RAO	Number of Samples	Number of Detections	Percentage of Detections	Number of Exceedances	Percentage of Exceedances	Maximum Detection	Minimum Detection
Metals														
Aluminum	µg/L	-	50	-	37000	4910	37000	7	5	71.43%	0	0.00%	83	15
Arsenic	µg/L	10	-	-	0.045	5.58	10	7	7	100.00%	1	14.29%	11	1.2
Barium	µg/L	2000	-	-	7300	419	2000	7	7	100.00%	0	0.00%	81	67
Beryllium	µg/L	4	-	-	73	5.0 U	73	7	0	0.00%	N/A	N/A	N/A	N/A
Calcium	µg/L	-	-	250000	-	239000	250000	7	7	100.00%	0	0.00%	120000	47000
Iron	µg/L	-	300	1000	26000	15300	26000	7	7	100.00%	0	0.00%	3200	350
Lead	µg/L	15	-	-	-	3.9	15	7	0	0.00%	N/A	N/A	N/A	N/A
Manganese	µg/L	-	50	-	880	1140	1140	7	7	100.00%	0	0.00%	46	8.6
Mercury	µg/L	2	-	-	0.57	0.20 U	2	7	0	0.00%	N/A	N/A	N/A	N/A
Sodium	µg/L	-	-	150000	-	80600	150000	7	7	100.00%	0	0.00%	20000	13000
General Chemistry														
Chloride	mg/L	-	250	-	-	77.7	250	7	7	100.00%	0	0.00%	22	2.3
Sulfate	mg/L	-	250	-	-	73.2	250	7	6	85.71%	0	0.00%	120	0.39

Notes:

mg/L	Milligram per liter
µg/L	Micrograms per liter
U	Not detected. The associated numerical value is the reporting detection limit.
J	Concentration is estimated.
N/A	Not available
-	Not applicable
MCL	Maximum Contaminant Level
RDA	Recommended Daily Allowance
RSL	Regional Screening Level
BV	Background Value
GW RAO	Groundwater Remedial Action Objective

Appendix A

**E:DAT (Electronic Data Access Tool)
(See attached USB key)**



Appendix B

Table of Analytical Results

TABLE B.1
GROUNDWATER SAMPLING RESULTS - VOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT101A 9/24/2013	WT101A 4/23/2014	WT101C 9/25/2013	WT101C 4/23/2014	WT101C 4/23/2014 Duplicate	WT101D 9/24/2013	WT101D 4/23/2014	WT101E 9/25/2013	WT101E 4/23/2014	WT102A 9/26/2013
Parameters	Units	GWRAOs a										
Volatile Organic Compounds (VOCs)												
1,1-Dichloroethane	µg/L	240	6.1	4.0	1.0 U	1.0 U	1.0 U	4.2	4.1	3.2	2.8	1.0 U
Benzene	µg/L	5	1.8	0.88 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	10000	1.0 U	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7	0.93 J	1.0 U
cis-1,2-Dichloroethene	µg/L	70	0.46 J	1.0 U	1.0 U	1.0 U	1.0 U	0.55 J	0.57 J	0.38 J	0.43 J	1.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated reporting limit
*	The total concentration of Trihalomethanes (Bromoform, Bromodichloromethane, Dibromochloromethane and Chloroform) cannot exceed 80 µg/L.
-	Not applicable.
11*	Concentration greater than criteria indicated.

TABLE B.1
GROUNDWATER SAMPLING RESULTS - VOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT102A 4/22/2014	WT102B 9/26/2013	WT102B 4/22/2014	WT106A 9/26/2013	WT106A 4/23/2014	WT106B 9/25/2013	WT106B 4/23/2014	WT106C 9/25/2013	WT106C 4/23/2014	WT111A 9/27/2013
Parameters	Units	GWRAOs a										
Volatile Organic Compounds (VOCs)												
1,1-Dichloroethane	µg/L	240	1.0 U	1.0 U	1.0 U	2.1	1.9	1.0 U	1.0 U	1.0 U	1.0 U	5.9
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	0.18 J	0.15 J	1.0 U	1.0 U	1.0 U	1.0 U	0.49 J
Carbon disulfide	µg/L	10000	1.0 U	1.6	1.0 U	1.0 U	1.0 U	0.89 J	0.59 J	0.39 J	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	1.0 U	0.46 J	0.38 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U	1.3	1.0	1.0 U	1.0 U	0.25 J

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated reporting limit
*	The total concentration of Trihalomethanes (Bromoform, Bromodichloromethane, Dibromochloromethane and Chloroform) cannot exceed 80 µg/L.
-	Not applicable.
11*	Concentration greater than criteria indicated.

TABLE B.1
GROUNDWATER SAMPLING RESULTS - VOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT111A 4/22/2014	WT114A 9/26/2013	WT114A 4/23/2014	WT114B 9/26/2013	WT114B 9/26/2013 Duplicate	WT114B 4/23/2014	WT114C 9/26/2013	WT114C 4/23/2014	WT115A 9/24/2013	WT115A 4/24/2014
Parameters	Units	GWRAOs a										
Volatile Organic Compounds (VOCs)												
1,1-Dichloroethane	µg/L	240	3.1	1.0 U	1.0 U	1.3	1.3	1.3	1.9	1.7	3.0	1.0 U
Benzene	µg/L	5	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	7.0 ^a	1.0 U
Carbon disulfide	µg/L	10000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.27 J	0.53 J	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	1.0 U	0.40 J	0.45 J	0.44 J	1.0 U	1.0 U	0.18 J	1.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated reporting limit
*	The total concentration of Trihalomethanes (Bromoform, Bromodichloromethane, Dibromochloromethane and Chloroform) cannot exceed 80 µg/L.
-	Not applicable.
11 ^a	Concentration greater than criteria indicated.

TABLE B.1
GROUNDWATER SAMPLING RESULTS - VOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT115B 9/24/2013	WT115B 4/24/2014	WT115C 9/24/2013	WT115C 9/24/2013 Duplicate	WT115C 4/24/2014	WT116A 9/24/2013	WT116A 4/24/2014	WT119B 9/24/2013	WT119B 4/24/2014	WT120A 9/26/2013
Parameters	Units	GWRAOs a										
Volatile Organic Compounds (VOCs)												
1,1-Dichloroethane	µg/L	240	4.9	5.6	3.1	3.2	3.0	4.0	3.0	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	22 ^a	23 ^a	1.0 U	1.0 U	1.0 U	3.4	2.5	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	10000	2.9	1.4 U	1.0 U	1.0 U	2.7 U	2.0 U	1.0 U	1.0 U	9.9 U	0.20 J
cis-1,2-Dichloroethene	µg/L	70	1.9 J	2.2	0.47 J	0.49 J	1.0 U	2.3	2.1	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	2.0 U	0.65 J	0.24 J	0.23 J	1.0 U	1.1 J	0.68 J	1.0 U	1.0 U	1.0 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated reporting limit
*	The total concentration of Trihalomethanes (Bromoform, Bromodichloromethane, Dibromochloromethane and Chloroform) cannot exceed 80 µg/L.
-	Not applicable.
11 ^a	Concentration greater than criteria indicated.

TABLE B.1
GROUNDWATER SAMPLING RESULTS - VOCs
HIMCO SITE
ELKHART, INDIANA

<i>Sample Location:</i> <i>Date</i>			<i>WT120A</i> <i>4/22/2014</i>	<i>WT120A</i> <i>4/22/2014</i> <i>Duplicate</i>	<i>WT120B</i> <i>9/26/2013</i>	<i>WT120B</i> <i>4/22/2014</i>	<i>WT120C</i> <i>9/26/2013</i>	<i>WT120C</i> <i>4/22/2014</i>	<i>WT121A</i> <i>9/25/2013</i>	<i>WT121A</i> <i>4/22/2014</i>	<i>WT121B</i> <i>9/25/2013</i>	<i>WT121B</i> <i>4/22/2014</i>
<i>Parameters</i>	<i>Units</i>	<i>GWRAOs</i> <i>a</i>										
<i>Volatile Organic Compounds (VOCs)</i>												
1,1-Dichloroethane	µg/L	240	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.8	1.4	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	10000	1.0 U	1.0 U	0.84 J	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U	1.5	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0	0.96 J	1.0 U	1.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3	0.81 J

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated reporting limit
*	The total concentration of Trihalomethanes (Bromoform, Bromodichloromethane, Dibromochloromethane and Chloroform) cannot exceed 80 µg/L.
-	Not applicable.
11*	Concentration greater than criteria indicated.

TABLE B.1
GROUNDWATER SAMPLING RESULTS - VOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT122A 9/26/2013	WT122A 4/22/2014	WT122B 9/26/2013	WT122B 4/22/2014	WT122C 9/26/2013	WT122C 4/22/2014	WTE3 9/24/2013	WTE3 4/23/2014
Parameters	Units	GWRAOs a								
Volatile Organic Compounds (VOCs)										
1,1-Dichloroethane	µg/L	240	5.5	6.9	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	0.37 J	0.32 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	10000	0.42 J	1.0 U	0.36 J	1.0 U	0.32 J	1.0 U	0.53 J	0.96 J
cis-1,2-Dichloroethene	µg/L	70	0.93 J	0.91 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	1.5	0.88 J	0.85 J	0.48 J	0.30 J	1.0 U	0.37 J	1.0 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated reporting limit
*	The total concentration of Trihalomethanes (Bromoform, Bromodichloromethane, Dibromochloromethane and Chloroform) cannot exceed 80 µg/L.
-	Not applicable.
11 ^a	Concentration greater than criteria indicated.

TABLE B.2
GROUNDWATER SAMPLING RESULTS - SVOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT101A 9/24/2013	WT101A 4/23/2014	WT101C 9/25/2013	WT101C 4/23/2014	WT101C 4/23/2014 Duplicate	WT101D 9/24/2013	WT101D 4/23/2014	WT101E 9/25/2013	WT101E 4/23/2014	WT102A 9/26/2013
Parameters	Units	GW RAOs a										
<i>Semi-volatile Organic Compounds (SVOCs)</i>												
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	2.1 U	2.9 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.9 U	2.5 U	1.9 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective (GW RAO) is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated value.
-	Not applicable.

TABLE B.2
GROUNDWATER SAMPLING RESULTS - SVOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT102A 4/22/2014	WT102B 9/26/2013	WT102B 4/22/2014	WT106A 9/26/2013	WT106A 4/23/2014	WT106B 9/25/2013	WT106B 4/23/2014	WT106C 9/25/2013	WT106C 4/23/2014	WT111A 9/27/2013
Parameters	Units	GW RAOs a										
Semi-volatile Organic Compounds (SVOCs)												
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	2.1 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	15 U	2.0 U	2.2 U	2.0 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective (GW RAO) is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated value.
-	Not applicable.

TABLE B.2
GROUNDWATER SAMPLING RESULTS - SVOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT111A 4/22/2014	WT114A 9/26/2013	WT114A 4/23/2014	WT114B 9/26/2013	WT114B 9/26/2013 Duplicate	WT114B 4/23/2014	WT114C 9/26/2013	WT114C 4/23/2014	WT115A 9/24/2013	WT115A 4/24/2014
Parameters	Units	GW RAOs a										
Semi-volatile Organic Compounds (SVOCs)												
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	1.9 U	2.0 U	2.0 U	2.0 U	2.0 U	2.1 U	2.2 U	2.1 U	1.9 U	2.9 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective (GW RAO) is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated value.
-	Not applicable.

TABLE B.2
GROUNDWATER SAMPLING RESULTS - SVOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT115B 9/24/2013	WT115B 4/24/2014	WT115C 9/24/2013	WT115C 9/24/2013 Duplicate	WT115C 4/24/2014	WT116A 9/24/2013	WT116A 4/24/2014	WT119B 9/24/2013	WT119B 4/24/2014	WT120A 9/26/2013
Parameters	Units	GW RAOs a										
Semi-volatile Organic Compounds (SVOCs)												
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	1.9 U	4.6 U	2.0 U	2.0 U	5.2 U	2.0 U	3.4 U	1.9 U	2.2 U	2.0 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective (GW RAO) is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated value.
-	Not applicable.

TABLE B.2
GROUNDWATER SAMPLING RESULTS - SVOCs
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date			WT120A 4/22/2014	WT120A 4/22/2014 Duplicate	WT120B 9/26/2013	WT120B 4/22/2014	WT120C 9/26/2013	WT120C 4/22/2014	WT121A 9/25/2013	WT121A 4/22/2014	WT121B 9/25/2013	WT121B 4/22/2014
Parameters	Units	GW RAOs a										
Semi-volatile Organic Compounds (SVOCs)												
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	2.0 U	1.9 U	2.1 U	2.0 U	2.0 U	2.1 U	1.9 U	1.9 U	2.0 U	1.9 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective (GW RAO) is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated value.
-	Not applicable.

TABLE B.2
GROUNDWATER SAMPLING RESULTS - SVOCs
HIMCO SITE
ELKHART, INDIANA

<i>Sample Location:</i> <i>Date</i>			<i>WT122A</i> <i>9/26/2013</i>	<i>WT122A</i> <i>4/22/2014</i>	<i>WT122B</i> <i>9/26/2013</i>	<i>WT122B</i> <i>4/22/2014</i>	<i>WT122C</i> <i>9/26/2013</i>	<i>WT122C</i> <i>4/22/2014</i>	<i>WTE3</i> <i>9/24/2013</i>	<i>WTE3</i> <i>4/23/2014</i>
<i>Parameters</i>	<i>Units</i>	<i>GW RAOs</i> <i>a</i>								
<i>Semi-volatile Organic Compounds (SVOCs)</i>										
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	2.0 U	2.1 U	2.0 U	2.1 U	2.0 U	2.1 U	1.9 U	3.2 U

Notes:

µg/L	micrograms per liter
a	The Groundwater Remedial Action Objective (GW RAO) is equal to the USEPA Primary Maximum Contaminant Level.
J	Value is estimated.
U	Not present at or above the associated value.
-	Not applicable.

TABLE B.3

**GROUNDWATER SAMPLING RESULTS - METALS AND GENERAL CHEMISTRY - UPPER AQUIFER
HIMCO SITE
ELKHART, INDIANA**

Sample Location:
Date:

Sample Location:								WT101A	WT101A	WT102A	WT102A	WT106A	WT106A	WT111A	WT111A
Date:								9/24/2013	4/23/2014	9/26/2013	4/22/2014	9/26/2013	4/23/2014	9/27/2013	4/22/2014
Parameters	Units	Primary	Secondary		RSL										
		MCL	MCL	RDA	Tapwater	BV	GW RAO								
a															
Metals															
Aluminum	µg/L	-	50	-	37000	651	37000	50 U	37 J	58	100	20 J	71	380	720
Arsenic	µg/L	10	-	-	0.045	2 U	10	7.8	4.8	1.0 U	1.0 U	1.5 U	1.1 U	5.4	2.8
Barium	µg/L	2000	-	-	7300	200 U	2000	100 J	83 J	35 J	29 J	33 J	30 J	77 J	50 J
Beryllium	µg/L	4	-	-	73	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	-	-	250000	-	242000	250000	230000	250000	84000	72000	110000	110000	150000	81000
Iron	µg/L	-	300	1000	26000	7100	26000	29000 ^a	20000	6400	380	730	520	1400	690
Lead	µg/L	15	-	-	-	3.0 U	15	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	2.5 J
Manganese	µg/L	-	50	-	880	1070	1070	2200 ^a	1300 ^a	480	220	460	450	430	260
Mercury	µg/L	2	-	-	0.57	0.2 U	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	µg/L	-	-	150000	-	102000	150000	27000	17000	66000	78000	22000	19000	23000	14000
General Chemistry															
Chloride	mg/L	-	250	-	-	228	250	29	17 J	93	130	37	39 J	15	12
Sulfate	mg/L	-	250	-	-	637	637	240	280 J	57	26	100	100 J	190 J	96

Notes:

µg/L	micrograms per liter
mg/L	milligrams per liter
GW RAO	Groundwater Remedial Action Objective
MCL	Maximum Contaminant Level
RDA	Recommended Dietary Allowance
RSL	Regional Screening Level
BV	Background Value
J	Value is estimated
U	Not present at or above the associated value
-	Not applicable
326000*	Concentration greater than the GW RAO

TABLE B.3
GROUNDWATER SAMPLING RESULTS - METALS AND GENERAL CHEMISTRY - UPPER AQUIFER
HIMCO SITE
ELKHART, INDIANA

Sample Location:																
Date:												WT116A	WT116A			
Parameters	Units	Primary		Secondary		RDA	RSL	BV	GW RAO ^a			WT115B	WT115B			
		MCL	MCL	MCL	MCL					WT115A	WT115A	4/24/2013	9/24/2013			
Metals																
Aluminum	µg/L	-	50	-	37000	-	37000	651	37000	50 U	19 J	150	47 J	25 J	570	13 J
Arsenic	µg/L	10	-	-	0.045	-	0.045	2 U	10	0.57 J	1.1	1.2	1.6	1.2	7.9	2.0
Barium	µg/L	2000	-	-	7300	-	7300	200 U	2000	81 J	79 J	37 J	150 J	96 J	190 J	87 J
Beryllium	µg/L	4	-	-	73	-	73	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	-	-	250000	-	-	-	242000	250000	95000	95000	210000	490000 ^a	290000 ^a	730000 ^a	500000 ^a
Iron	µg/L	-	300	1000	26000	-	26000	7100	26000	200	290	3900	100 U	100 U	25000	24000
Lead	µg/L	15	-	-	-	-	-	3.0 U	15	3.0 U	3.0 U	2.9 J	3.0 U	3.0 U	30 ^a	
Manganese	µg/L	-	50	-	880	-	880	1070	1070	40	73	600	2.2 J	1.1 J	1500 ^a	1500 ^a
Mercury	µg/L	2	-	-	0.57	-	0.57	0.2 U	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	µg/L	-	-	150000	-	-	-	102000	150000	280000 ^a	250000 ^a	1500 J	40000	30000	170000 ^a	70000
General Chemistry																
Chloride	mg/L	-	250	-	-	-	-	228	250	85	400 J ^a	1.7	27	31	17	11
Sulfate	mg/L	-	250	-	-	-	-	637	637	8.2	42 J ^a	8.2	210	160	370	400

Notes:

- µg/L micrograms per liter
- mg/L milligrams per liter
- GW RAO Groundwater Remedial Action Objective
- MCL Maximum Contaminant Level
- RDA Recommended Dietary Allowance
- RSL Regional Screening Level
- BV Background Value
- J Value is estimated
- U Not present at or above the associated value
- Not applicable
- 326000^a Concentration greater than the GW RAO

TABLE B.3

GROUNDWATER SAMPLING RESULTS - METALS AND GENERAL CHEMISTRY - UPPER AQUIFER
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date:								WT119B 9/24/2013	WT119B 4/24/2014	WT120C 9/26/2013	WT120C 4/22/2014	WT121A 9/25/2013	WT121A 4/22/2014	WT122A 9/26/2013	WT122A 4/22/2014
Parameters	Units	Primary MCL	Secondary MCL	RDA	RSL Tapwater	BV	GW RAO a								
Metals															
Aluminum	µg/L	-	50	-	37000	651	37000	160	100	50 U	76	80	42 J	15 J	39 J
Arsenic	µg/L	10	-	-	0.045	2 U	10	7.9	4.4	1.0 U	1.0 U	8.6	8.2	1.0 U	1.0 U
Barium	µg/L	2000	-	-	7300	200 U	2000	61 J	41 J	21 J	18 J	67 J	72 J	64 J	65 J
Beryllium	µg/L	4	-	-	73	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	-	-	250000	-	242000	250000	150000	130000	86000	73000	83000	85000	220000	240000
Iron	µg/L	-	300	1000	26000	7100	26000	1100	1300	100 U	220	3200	3900	3000	4700
Lead	µg/L	15	-	-	-	3.0 U	15	3.0 U	2.8 J	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	2.1 J
Manganese	µg/L	-	50	-	880	1070	1070	140	99	15 U	5.2 J	56	47	510	700
Mercury	µg/L	2	-	-	0.57	0.2 U	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	µg/L	-	-	150000	-	102000	150000	41000	37000	43000	33000	38000	47000	31000	37000
General Chemistry															
Chloride	mg/L	-	250	-	-	228	250	20	19	49	22	77	86	35	30
Sulfate	mg/L	-	250	-	-	637	637	210	180	24	14	61	68	220	260

Notes:

µg/L	micrograms per liter
mg/L	milligrams per liter
GW RAO	Groundwater Remedial Action Objective
MCL	Maximum Contaminant Level
RDA	Recommended Dietary Allowance
RSL	Regional Screening Level
BV	Background Value
J	Value is estimated
U	Not present at or above the associated value
-	Not applicable
326000*	Concentration greater than the GW RAO

TABLE B.4

GROUNDWATER SAMPLING RESULTS - METALS AND GENERAL CHEMISTRY - INTERMEDIATE AQUIFER
HIMCO SITE
ELKHART, INDIANA

Sample Location:								WT101D	WT101D	WT101E	WT101E	WT102B	WT102B	WT106B	WT106B	WT114B
Date:								9/24/2013	4/23/2014	9/25/2013	4/23/2014	9/26/2013	4/22/2014	9/25/2013	4/23/2014	9/26/2013
Parameters	Units	Primary	Secondary	RDA	RSL		BV	GW	RAO							
		MCL	MCL		Tapwater	a										
Metals																
Aluminum	µg/L	-	50	-	37000	161	37000	50 U	50 U	27 J	50 U	50 U	50 U	50 U	50 U	50 U
Arsenic	µg/L	10	-	-	0.045	7.05	10	1.0 U	1.0 U	4.6	3.7	2.6	2.7	13 ^a	13 ^a	8.7
Barium	µg/L	2000	-	-	7300	200 U	2000	57 J	51 J	39 J	44 J	130 J	130 J	98 J	100 J	49 J
Beryllium	µg/L	4	-	-	73	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	-	-	250000	-	85800	250000	99000	94000	91000	100000	66000	66000	140000	140000	79000
Iron	µg/L	-	300	1000	26000	2170	26000	1800	1600	4600	3700	430	530	4900	6000	2300
Lead	µg/L	15	-	-	-	3.0 U	15	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Manganese	µg/L	-	50	-	880	170	880	46	46	42	47	40	40	38	42	42
Mercury	µg/L	2	-	-	0.57	0.2 U	2	0.20 U	0.20 U	0.16 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	µg/L	-	-	150000	-	31600	150000	22000	21000	15000	18000	30000	31000	27000	30000	22000
General Chemistry																
Chloride	mg/L	-	250	-	-	54.5	250	38	43 J	35	37 J	48	53	25	4.7 J	40
Sulfate	mg/L	-	250	-	-	370	370	87	99 J	98	100 J	29	25	170	29 J	87

Notes:

µg/L	micrograms per liter
mg/L	milligrams per liter
GW RAO	Groundwater Remedial Action Objective
MCL	Maximum Contaminant Level
RDA	Recommended Dietary Allowance
RSL	Regional Screening Level
BV	Background Value
J	Value is estimated
U	Not present at or above the associated value
-	Not applicable

326000^a Concentration greater than the GW RAO

TABLE B.4

GROUNDWATER SAMPLING RESULTS - METALS AND GENERAL CHEMISTRY - INTERMEDIATE AQUIFER
HIMCO SITE
ELKHART, INDIANA

Sample Location:

Date:

							WT114B 9/26/2013 Duplicate	WT114B 4/23/2014	WT114C 9/26/2013	WT114C 4/23/2014	WT115C 9/24/2013	WT115C 9/24/2013 Duplicate	WT115C 4/24/2014	WT120A 9/26/2013	WT120A 4/22/2014
Parameters	Units	Primary MCL	Secondary MCL	RDA	RSL Tapwater	BV	GW RAO a								
Metals															
Aluminum	µg/L	-	50	-	37000	161	37000	50 U	50 U	50 U	50 U	120	76	50 U	50 U
Arsenic	µg/L	10	-	-	0.045	7.05	10	8.5	8.1	21*	19*	1.6	1.8	1.9	4.3
Barium	µg/L	2000	-	-	7300	200 U	2000	49 J	48 J	62 J	59 J	61 J	62 J	44 J	96 J
Beryllium	µg/L	4	-	-	73	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	-	-	250000	-	85800	250000	79000	80000	76000	77000	130000	130000	110000	77000
Iron	µg/L	-	300	1000	26000	2170	26000	2300	2300	3300	3000	10000	8500	3700	1000
Lead	µg/L	15	-	-	-	3.0 U	15	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	2.3 J	3.0 U
Manganese	µg/L	-	50	-	880	170	880	42	44	30	32	74	75	58	81
Mercury	µg/L	2	-	-	0.57	0.2 U	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	µg/L	-	-	150000	-	31600	150000	22000	22000	18000	18000	21000	21000	18000	50000
General Chemistry															
Chloride	mg/L	-	250	-	-	54.5	250	40	39 J	34	33	39	39	42 J	84
Sulfate	mg/L	-	250	-	-	370	370	87	90 J	92	86	120	110	100 J	32

Notes:

µg/L	micrograms per liter
mg/L	milligrams per liter
GW RAO	Groundwater Remedial Action Objective
MCL	Maximum Contaminant Level
RDA	Recommended Dietary Allowance
RSL	Regional Screening Level
BV	Background Value
J	Value is estimated
U	Not present at or above the associated value
-	Not applicable
326000*	Concentration greater than the GW RAO

TABLE B.4

GROUNDWATER SAMPLING RESULTS - METALS AND GENERAL CHEMISTRY - INTERMEDIATE AQUIFER
HIMCO SITE
ELKHART, INDIANA

Sample Location: Date:								WT120A 4/22/2014 Duplicate	WT120B 9/26/2013	WT120B 4/22/2014	WT121B 9/25/2013	WT121B 4/22/2014	WT122B 9/26/2013	WT122B 4/22/2014	WT122C 9/26/2013	WT122C 4/22/2014
Parameters	Units	Primary MCL	Secondary MCL	RDA	RSL Tapwater	BV	GW RAO a									
Metals																
Aluminum	µg/L	-	50	-	37000	161	37000	50 U	9.5 J	50 U	35 J	82	50 U	28 J	17 J	50 U
Arsenic	µg/L	10	-	-	0.045	7.05	10	4.1	7.1	6.7	14 ^a	12 ^a	1.3	1.4 U	3.7	3.5
Barium	µg/L	2000	-	-	7300	200 U	2000	75 J	89 J	91 J	400	450	48 J	48 J	44 J	41 J
Beryllium	µg/L	4	-	-	73	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	-	-	250000	-	85800	250000	65000	69000	70000	100000	100000	100000	100000	100000	94000
Iron	µg/L	-	300	1000	26000	2170	26000	810	1100	1200	5700	7500	2900	5200	3200	2100
Lead	µg/L	15	-	-	-	3.0 U	15	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Manganese	µg/L	-	50	-	880	170	880	66	220	210	33	33	100	100	150	130
Mercury	µg/L	2	-	-	0.57	0.2 U	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	µg/L	-	-	150000	-	31600	150000	39000	14000	14000	53000	56000	21000	22000	19000	20000
General Chemistry																
Chloride	mg/L	-	250	-	-	54.5	250	59	27	34	23	29	40	42	33	36
Sulfate	mg/L	-	250	-	-	370	370	33	42	51	64	74	120	130	130	140

Notes:

µg/L	micrograms per liter
mg/L	milligrams per liter
GW RAO	Groundwater Remedial Action Objective
MCL	Maximum Contaminant Level
RDA	Recommended Dietary Allowance
RSL	Regional Screening Level
BV	Background Value
J	Value is estimated
U	Not present at or above the associated value
-	Not applicable
326000 ^a	Concentration greater than the GW RAO

TABLE B.5

**GROUNDWATER SAMPLING RESULTS - METALS AND GENERAL CHEMISTRY - LOWER AQUIFER
HIMCO SITE
ELKHART, INDIANA**

Sample Location: Date:								WT101C 9/25/2013	WT101C 4/23/2014	WT101C 4/23/2014 Duplicate	WT106C 9/25/2013	WT106C 4/23/2014	WTE3 9/24/2013	WTE3 4/23/2014
Parameters	Units	Primary MCL	Secondary MCL	RDA	RSL Tapwater	BV	GW RAO a							
Metals														
Aluminum	µg/L	-	50	-	37000	4910	37000	21 J	15 J	15 J	83	37 J	50 U	50 U
Arsenic	µg/L	10	-	-	0.045	5.58	10	7.2	8.0	7.7	9.4	11 ^a	1.2	2.9
Barium	µg/L	2000	-	-	7300	419	2000	76 J	81 J	80 J	74 J	75 J	67 J	70 J
Beryllium	µg/L	4	-	-	73	5.0 U	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	-	-	250000	-	239000	250000	47000	50000	50000	47000	48000	63000	120000
Iron	µg/L	-	300	1000	26000	15300	26000	480	680	1100	1300	350	3200	3200
Lead	µg/L	15	-	-	-	3.9	15	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Manganese	µg/L	-	50	-	880	1140	1140	9.0 J	8.8 J	8.6 J	27	24	46	40
Mercury	µg/L	2	-	-	0.57	0.20 U	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	µg/L	-	-	150000	-	80600	150000	15000	16000	16000	18000	20000	13000	20000
General Chemistry														
Chloride	mg/L	-	250	-	-	77.7	250	2.3	2.3 J	2.3 J	11	11 J	8.9	22
Sulfate	mg/L	-	250	-	-	73.2	250	0.54 J	1.7 J	1.7 J	0.39 J	1.0 U	12	120

Notes:

µg/L	micrograms per liter
mg/L	milligrams per liter
GW RAO	Groundwater Remedial Action Objective
MCL	Maximum Contaminant Level
RDA	Recommended Dietary Allowance
RSL	Regional Screening Level
BV	Background Value
J	Value is estimated
U	Not present at or above the associated value
-	Not applicable
326000 ^a	Concentration greater than the GW RAO

Appendix C

**Laboratory Reports and Data Validation Memoranda
(See attached CD)**

Appendix D

Groundwater Sampling Stabilization Parameters

TABLE D.1

GROUNDWATER SAMPLING STABILIZATION PARAMETERS
GROUNDWATER SAMPLING RESULTS - SEPTEMBER 2013 TO APRIL 2014
HIMCO SITE
ELKHART, INDIANA

<i>Sample Location:</i>		WT101A	WT101A	WT101C	WT101C	WT101D	WT101D	WT101E	WT101E	WT102A	WT102A	WT102B
<i>Sample Date:</i>		9/24/2013	4/23/2014	9/25/2013	4/23/2014	9/24/2013	4/23/2014	9/25/2013	4/23/2014	9/26/2013	4/22/2014	9/26/2013
<i>Parameters</i>	<i>Units</i>											
<i>Field Parameters</i>												
Conductivity, field	µS/cm	1.31	0.983	0.432	0.364	0.717	0.511	0.637	0.516	0.688	0.55	0.596
Dissolved oxygen (DO), field	µg/L	80	590	800	300	70	700	300	780	1660	2400	600
Oxidation reduction potential (ORP), field	millivolts	-28	-8.3	-157	-59.1	-213	-198.8	-252	-211.1	37.7	-71.8	-279
pH, field	s.u.	6.6	6.58	6.62	7.25	6.47	6.57	6.4	6.38	7.2	7.22	7.4
Temperature, sample	Deg C	16.39	11.4	17.45	14.44	14.91	13.22	14.52	13.69	13.96	8.23	13.91
Turbidity	NTU	0.83	4.9	3.22	4.5	1.19	4.5	2.1	4.6	2.34	4.76	2.03

Notes:

µS/cm	microSiemens per cm
mg/L	milligrams per litre
s.u.	standard units
NTU	Nephelometric Turbidity Units

TABLE D.1

GROUNDWATER SAMPLING STABILIZATION PARAMETERS
GROUNDWATER SAMPLING RESULTS - SEPTEMBER 2013 TO APRIL 2014
HIMCO SITE
ELKHART, INDIANA

<i>Sample Location:</i>		<i>WT102B</i>	<i>WT106A</i>	<i>WT106A</i>	<i>WT106B</i>	<i>WT106B</i>	<i>WT106C</i>	<i>WT106C</i>	<i>WT111A</i>	<i>WT111A</i>	<i>WT114A</i>	<i>WT114A</i>
<i>Sample Date:</i>		<i>4/22/2014</i>	<i>9/26/2013</i>	<i>4/23/2014</i>	<i>9/25/2013</i>	<i>4/23/2014</i>	<i>9/25/2013</i>	<i>4/23/2014</i>	<i>9/27/2013</i>	<i>4/22/2014</i>	<i>9/26/2013</i>	<i>4/23/2014</i>
<i>Parameters</i>	<i>Units</i>											
<i>Field Parameters</i>												
Conductivity, field	µS/cm	0.455	0.635	0.478	1.18	0.88	0.45	0.347	0.854	0.418	1.623	1.244
Dissolved oxygen (DO), field	µg/L	1140	1610	1590	310	1590	510	370	410	3200	910	670
Oxidation reduction potential (ORP), field	millivolts	-119.6	30.3	78.6	-272	-175	-138	-32.3	-50	-1.2	-70.2	-192.7
pH, field	s.u.	7.53	7.02	6.94	6.61	7.09	6.63	7.38	6.32	6.39	6.22	7.09
Temperature, sample	Deg C	10.14	13.19	7.94	12.88	11.6	16.23	11.5	13.78	9.33	15.89	10.85
Turbidity	NTU	4.92	3.78	3.7	1.95	4.7	4.85	4.3	2.92	4.2	1.56	4.8

Notes:

µS/cm	microSiemens per cm
mg/L	milligrams per litre
s.u.	standard units
NTU	Nephelometric Turbidity Units

TABLE D.1

GROUNDWATER SAMPLING STABILIZATION PARAMETERS
GROUNDWATER SAMPLING RESULTS - SEPTEMBER 2013 TO APRIL 2014
HIMCO SITE
ELKHART, INDIANA

<i>Sample Location:</i>		WT114B	WT114B	WT114C	WT114C	WT115A	WT115A	WT115B	WT115B	WT115C	WT115C	WT116A
<i>Sample Date:</i>		9/26/2013	4/23/2014	9/26/2013	4/23/2014	9/24/2013	4/24/2014	9/24/2013	4/24/2014	9/24/2013	4/24/2014	9/24/2013
<i>Parameters</i>	<i>Units</i>											
<i>Field Parameters</i>												
Conductivity, field	µS/cm	0.618	0.458	0.612	0.429	0.895	0.194	1.917	1.43	0.795	0.562	3.679
Dissolved oxygen (DO), field	µg/L	330	3500	400	600	640	900	800	7600	280	350	3040
Oxidation reduction potential (ORP), field	millivolts	-198	-69.1	-237	-265.9	-124.9	-69.8	-353.9	-219.5	-128	-188.2	32
pH, field	s.u.	6.96	6.94	6.86	6.33	6.65	5.6	6.76	6.5	6.93	7.07	6.66
Temperature, sample	Deg C	14.48	12.21	13.37	11.29	17.01	8.25	13.52	11.37	15.69	11.96	17.98
Turbidity	NTU	0.31	4.2	0.44	4.5	4.42	4	1.19	4.1	1.32	4.9	4.77

Notes:

µS/cm	microSiemens per cm
mg/L	milligrams per litre
s.u.	standard units
NTU	Nephelometric Turbidity Units

TABLE D.1
GROUNDWATER SAMPLING STABILIZATION PARAMETERS
GROUNDWATER SAMPLING RESULTS - SEPTEMBER 2013 TO APRIL 2014
HIMCO SITE
ELKHART, INDIANA

<i>Sample Location:</i>		WT116A	WT119B	WT119B	WT120A	WT120A	WT120B	WT120B	WT120C	WT120C	WT121A	WT121A
<i>Sample Date:</i>		4/24/2014	9/24/2013	4/24/2014	9/26/2013	4/22/2014	9/26/2013	4/22/2014	9/26/2013	4/22/2014	9/25/2013	4/22/2014
<i>Parameters</i>	<i>Units</i>											
<i>Field Parameters</i>												
Conductivity, field	µS/cm	2.139	1.28	0.682	0.722	0.486	0.49	0.436	0.737	0.42	0.735	0.551
Dissolved oxygen (DO), field	µg/L	780	500	410	50	220	610	1440	2420	2510	220	690
Oxidation reduction potential (ORP), field	millivolts	-122.3	-24.2	-28.3	-172	-227.5	-248.1	-102.9	5	-58.7	-170	26.5
pH, field	s.u.	6.46	6.79	6.8	7.09	7.4	6.53	7.32	6.89	7.34	6.57	6.31
Temperature, sample	Deg C	10.68	12.2	8.94	12.72	12.84	13.5	12.51	16.33	9.86	14.44	10.12
Turbidity	NTU	4.4	2.5	4.6	0.84	4.8	0.66	4.9	0.68	4.8	2.44	4.6

Notes:

µS/cm	microSiemens per cm
mg/L	milligrams per litre
s.u.	standard units
NTU	Nephelometric Turbidity Units

TABLE D.1

GROUNDWATER SAMPLING STABILIZATION PARAMETERS
GROUNDWATER SAMPLING RESULTS - SEPTEMBER 2013 TO APRIL 2014
HIMCO SITE
ELKHART, INDIANA

Sample Location:		WT121B	WT121B	WT122A	WT122A	WT122B	WT122B	WT122C	WT122C	WTE1	WTE3
Sample Date:		9/25/2013	4/22/2014	9/26/2013	4/22/2014	9/26/2013	4/22/2014	9/26/2013	4/22/2014	4/23/2014	9/24/2013
Parameters	Units										
Field Parameters											
Conductivity, field	µS/cm	1.16	0.882	1.12	1.101	0.652	0.573	0.74	0.586	0.604	0.457
Dissolved oxygen (DO), field	µg/L	50	600	300	3570	830	370	710	130	870	2310
Oxidation reduction potential (ORP), field	millivolts	-188	-180.9	-210.4	-9.5	-186.2	-228.6	-249	-302.7	-77.9	215.3
pH, field	s.u.	6.37	7.06	7.04	6.92	7.56	7.14	6.91	7.09	7.24	7.05
Temperature, sample	Deg C	13.06	10.82	14.74	11.8	14.75	12.64	15.41	12.92	12.66	15.08
Turbidity	NTU	1.62	5	0.61	4.3	0.62	4.5	0.3	4.7	4.4	3.84

Notes:

µS/cm	microSiemens per cm
mg/L	milligrams per litre
s.u.	standard units
NTU	Nephelometric Turbidity Units

February 20, 2015

Reference No. 039611

Mr. Rosauro del Rosario
EPA Project Manager/Coordinator
United States Environmental Protection Agency (USEPA), Region 5
77 West Jackson Boulevard
Chicago, Illinois
60604

Dear Mr. del Rosario:

Re: Himco Dump Superfund Site, Elkhart, Indiana
2014 Annual Groundwater Monitoring Report
Response to Comments



On behalf of the Himco Site Trust (the Trust), Conestoga-Rovers & Associates (CRA) has prepared this letter in response to your January 21, 2015 letter with comments on the 2014 Annual Groundwater Monitoring Report (November 2014). CRA understands that the U.S. Environmental Protection Agency (USEPA) completed this review with assistance from the Indiana Department of Environmental Management (IDEM) and the U.S. Army Corps of Engineers (USACE). For clarity, your comments have been reproduced verbatim from the January 21, 2015 letter, and are shown in bold italics, followed by CRA's response.

General Comments

General Comment No. 1

The response to Comment No. 8 requires some clarification. The response indicates that the surface water gages will be reset and surface water will continue to be monitored, which is fine. The response also notes that the gages in the small pond and L pond will be adjusted. In addition to this, EPA recommends the gage at the quarry pond also be surveyed with the other ponds. In future groundwater contour maps, the pond elevations for the upper aquifer at all three locations should be incorporated into the groundwater contours. It is not correct to show a groundwater contour cutting across the lakes, especially when it is at a higher elevation than the surface water elevation. For instance, Figure 3.2 shows the groundwater contours bisecting the little pond and the quarry pond. Since the surface water will be flat, there cannot be an elevation difference and slope. Additionally, the quarry pond indicates the surface water to be at 754.17, but the groundwater elevation contours show elevation contours of up to 755. This puts the groundwater almost 1 foot above the pond elevation.



**CONESTOGA-ROVERS
& ASSOCIATES**

February 20, 2015

Reference No. 039611

- 2 -

Since the upper aquifer is unconfirmed, this is not possible. It may be that this staff gage is also incorrect. The main point is that the surface water elevation in the 3 ponds needs to be measured, evaluated and contoured with the upper aquifer groundwater contour maps. Obviously, if the groundwater elevations are below surface water elevations, the ponds are not as significant.

CRA General Response No. 1

USEPA is correct that the Upper Aquifer contours should honor the surface water elevations. The ponds represent the water table. CRA has revised the September 2013 and April 2014 contours (see attached Figures 3.2 and 3.3) by adding a series of "ghost points" that are equal to the surface water elevation within the limits of the three ponds. CRA then edited the contours by hand and to ensure the contours did not cross the limits of the ponds. Revised versions of the contours are included with this letter.

To re-iterate the response to USEPA's comments on this matter in their letter dated December 16, 2014, there were measurement errors at the surface water monitoring stations adjacent to Small Pond and L Pond that CRA was unable to resolve. The ponds freeze and the ice shifts the surface water stakes each winter and they must be reset and re-surveyed annually. In addition, as shown in the Figure 1 (included in CRA's January 15, 2015 letter), there are additional stakes in the area that may have been mistaken for the surface water station. CRA has removed the erroneous measurements from the 2013 and 2014 elevation contours. In the future CRA will ensure the surface water stations are reset, re-surveyed and labeled prior to the spring monitoring round.

Upon receiving USEPA's final approval of the 2014 Annual Monitoring Groundwater Report, CRA will provide USEPA, IDEM and USACE with final hardcopies and electronic copies of the report. The Himco Site Trust infers that USEPA's approval of the 2014 Annual Groundwater Monitoring Report will also serve as approval of the 2013 Annual Monitoring Groundwater Report (November 2013). The Himco Site Trust has not received USEPA comments and/or approval of the 2013 report.



**CONESTOGA-ROVERS
& ASSOCIATES**

February 20, 2015

Reference No. 039611

- 3 -

Please contact me at (519) 884-0510 if you have questions or require additional information.

Yours truly,

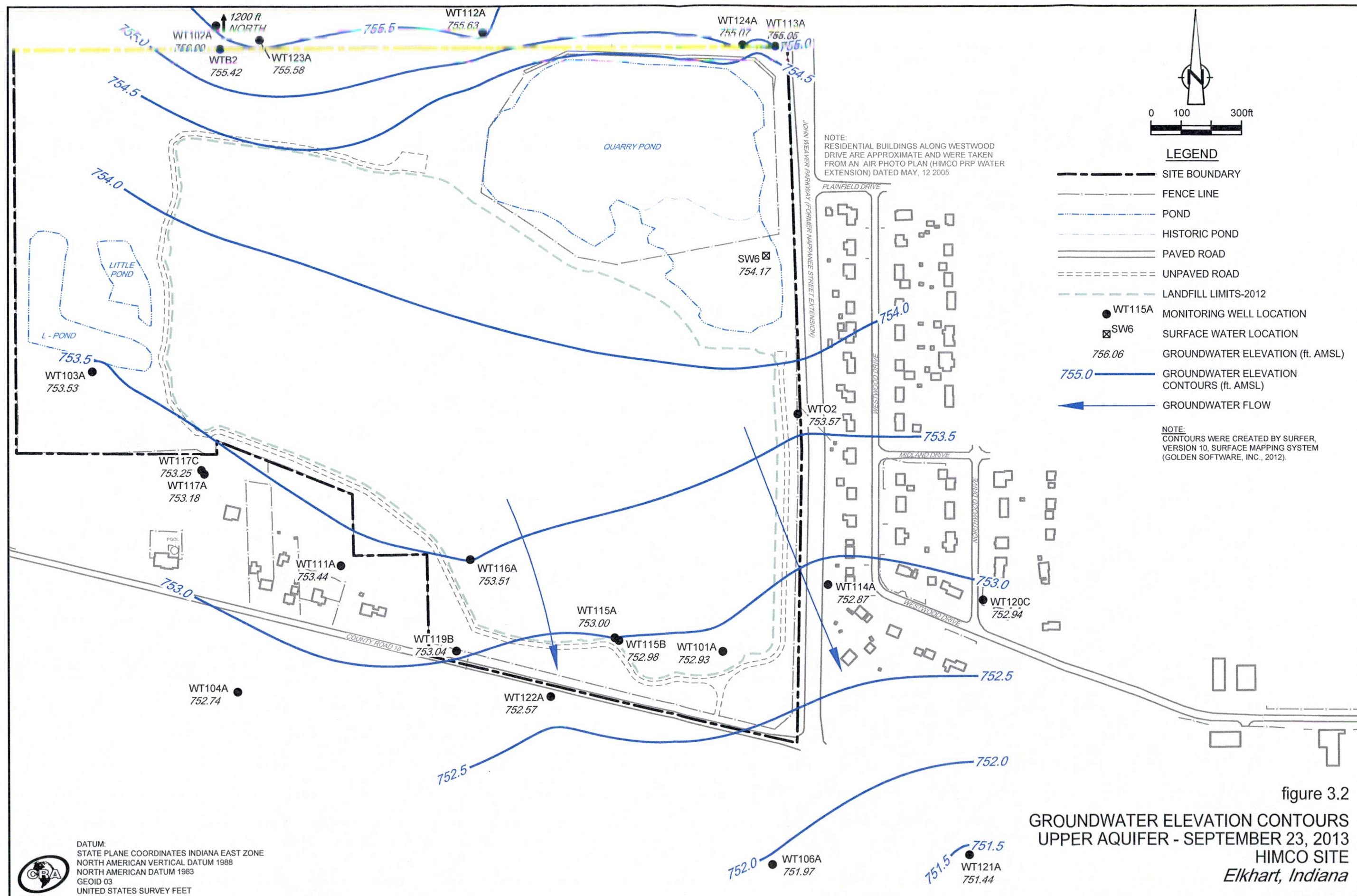
CONESTOGA-ROVERS & ASSOCIATES

Alan W. Van Norman, P. Eng.

HS/mg/53

Encl.

cc: Josh Decktor, Bayer HealthCare, Project Coordinator
Tom Lenz, Bayer HealthCare, Alternate Project Coordinator
Gary Toczylowski, Bayer HealthCare (via email)
Doug Petroff, IDEM
Christopher Fassero, USACE
Alan Deal, CRA (via email)



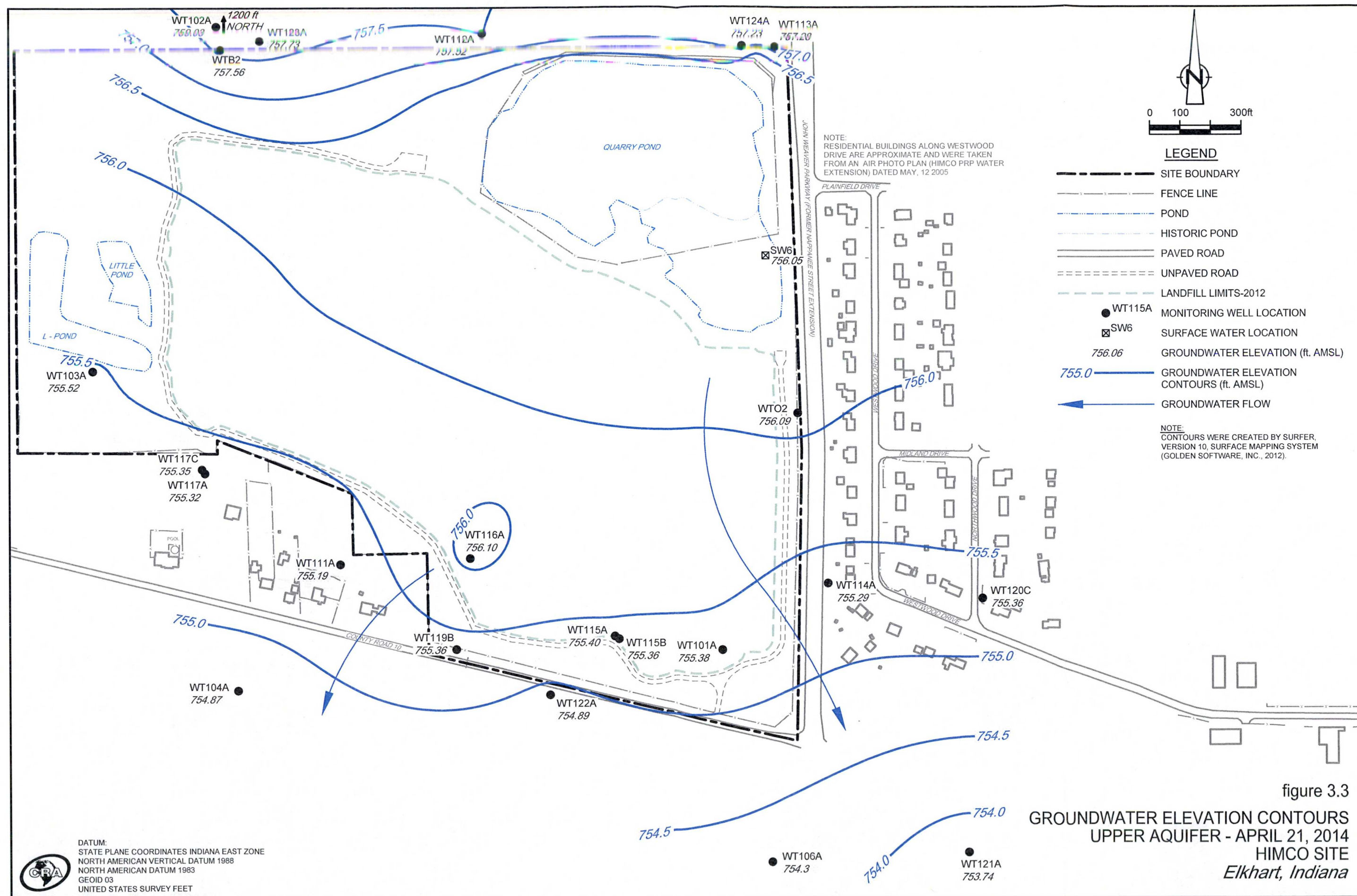


figure 3.3
GROUNDWATER ELEVATION CONTOURS
UPPER AQUIFER - APRIL 21, 2014
HIMCO SITE
Elkhart, Indiana



**CONESTOGA-ROVERS
& ASSOCIATES**

651 Colby Drive, Waterloo, Ontario, N2V 1C2
Telephone: (519) 884-0510 Fax: (519) 884-0525
www.CRAworld.com

April 24, 2015

Reference No. 039611

Mr. Rosauro del Rosario
EPA Project Manager/Coordinator
United States Environmental Protection Agency (USEPA), Region 5
77 West Jackson Boulevard
Chicago, Illinois
60604



Dear Mr. del Rosario:

Re: Response to USEPA's Request for Information to Support Five-year Review
Himco Site, Elkhart, Indiana (Site)

On behalf of the Performing Settling Defendants (PSDs), collectively known as the Himco Site Trust, Conestoga Rovers & Associates (CRA) has prepared this letter in response to your February 17, 2015 letter with comments on the Initial Five-Year-Review (FYR) for the above captioned Site. CRA understands that the U.S. Environmental Protection Agency (USEPA) completed this review with assistance from the Indiana Department of Environmental Management (IDEM) and the U.S. Army Corps of Engineers (USACE). For clarity, your comments have been reproduced verbatim from the February 17, 2015 letter, and are shown in italic font, followed by CRA's response.

Institutional Controls (ICs)

Comment No. 1

Copies of all deed restrictions, restrictive covenants, and other IC instruments that are in effect for the Site. These include all the ICs in place for those residents that were provided alternate water (city water) as part of the final remedy for the Site and any deed restrictions or similar mechanisms that are in effect for the various parcels constituting the Site;

CRA Response No. 1

There are 47 properties surrounding the Himco Site that require Environmental Restrictive Covenants (ERCs) and Access Agreements related to the Site. The PSDs have obtained signed Access Agreements from 43 of the 47 properties and ERCs from 42 of the 47 properties surrounding the Site. The PSDs have made numerous attempts to obtain signed ERCs and



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 2 -

Access Agreements since 2008, and it is unlikely that the five (5) remaining ERCs will be obtained from the current property owners. The PSDs retained Faegre Baker Daniels to assist with this work. A summary of Faegre Baker Daniels' correspondence with the five (5) remaining property owners is provided in Attachment 1.

The PSDs recently became aware that JPMorgan Chase & Co. took over ownership of the former Saleh property (28399 County Road 10, Elkhart, IN) by sheriff deed in Fall 2014. Faegre Baker Daniels has been in communications with assorted attorneys for/at JPMC since the Fall 2014; however, they have not been able to obtain a ERC and/or Access Agreement for the Saleh property.

The PSDs have previously provided USEPA with electronic copies of all of the signed ERCs and Access Agreements in a September 11, 2012 memorandum, which is attached as Attachment 1.

Comment No. 2

What, if any, additional ICs are necessary to ensure that the remedy is protective, in compliance with the ROD Amendment and Consent Decree; and

CRA Response No. 2

In accordance with Section IX of the Consent Decree (Civil Action No. 2:07-cv-304-TS) (CD), the PSDs have implemented institutional controls for the Site and for properties surrounding the Site as part of the RD/RA construction. As noted in CRA Response No. 1, there are five (5) properties that have not signed ERCs. The PSDs will continue attempts to secure these remaining ERCs; however, it is unlikely that the five (5) remaining ERCs will be obtained from the current property owners. The PSDs will assess the need for additional institutional controls for properties east and south of the Site subsequent to future groundwater investigations.

No other additional IC's are considered to be necessary at this time.

Comment No. 3

A determination of the enforceability of the IC instruments that are in effect. Specifically, assess whether such instruments are enforceable under State and/or Federal authorities and the need for intending such instruments in light of recent changes in State/Federal on such matters (e.g., UECA, State/Federal policies or guidance);



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 3 -

CRA Response No. 3

It is our understanding that Indiana has not adopted the Uniform Environmental Covenants Act (UECA). However, we further understand that ERCs remain enforceable pursuant to Ind. Code § 13-14-2-6 and Ind. Code § 13-25-4-24. Also, in light of USEPA and IDEM's prior approval of the templates for the ERCs and the Access Agreements utilized (and the lack of a noted change in the requirements for the same), the PSDs do not see any need for amending such instruments.

Groundwater

Comment No. 4

An analysis of the groundwater data collected from completion of the remedial action to the present. This includes, but is not limited to, a trend analysis to determine if contaminants of concern (e.g., arsenic, benzene, iron, etc.) have been trending upwards or downwards since the remedy was implemented in 2011. As part of this effort, Bayer shall provide charts/graphs illustrating the trend for each contaminant of concern;

CRA Response No. 4

CRA reviewed the groundwater data for the Site and completed a trend analysis on the analytes currently included in the Groundwater Monitoring Program (GMP) for the Site. The 18 analytes include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals and general chemistry parameters. Groundwater data used for the analysis were collected from December 2010 to September 2014 from the wells currently included in the GMP that monitor the Upper, Intermediate and Lower Aquifers. Of the total of 486 data sets (i.e., 27 wells x 18 analytes) available for trend testing, 211 data sets were not tested for trends due number of non-detects (i.e. more than 50 percent). Of the remaining 275 data sets, 213 did not have a statistically significant trend and 62 data sets were found to have a statistically significant trend (46 decreasing and 16 increasing).

Decreasing trends were identified in 10 percent of the data sets for 1,1-dichloroethane (1,1-DCA), arsenic, barium, benzene, calcium, carbon disulfide, chloride, iron, manganese, sodium and sulfate data from selected monitoring wells in all three aquifers (mainly in the Upper and Intermediate Aquifer compliance wells). For parameters with decreasing trends, the



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 4 -

September 2014 concentration and a comparison to the Groundwater Remedial Action Objectives (GW RAOs) are as follows:

<i>Analyte</i>	<i>Aquifer</i>	<i>Well</i>	<i>September 2014 Concentration (µg/L)</i>	<i>GW RAO (µg/L)</i>	<i>Percentage of GW RAO</i>
Benzene	Upper	WT101A	0.59 J	5	12%
Sulfate	Upper	WT101A	72000	250000	29%
Iron	Lower	WT101C	370	26000	1%
Manganese	Lower	WT101C	15 U	1140	1%
Sodium	Lower	WT101C	18000	150000	12%
Chloride	Lower	WT101C	2200	250000	1%
Manganese	Intermediate	WT101D	43	1140	4%
Barium	Intermediate	WT101E	45 J	2000	2%
Sulfate	Upper	WT102A	38000	250000	15%
Barium	Upper	WT106A	32 J	2000	2%
Sodium	Upper	WT106A	22000	150000	15%
Barium	Intermediate	WT106B	98 J	2000	5%
Manganese	Intermediate	WT106B	48	1140	4%
Sodium	Intermediate	WT106B	27000	150000	18%
Sulfate	Intermediate	WT106B	76000	250000	30%
Iron	Upper	WT111A	1300	26000	5%
Manganese	Upper	WT111A	360	1140	32%
Sodium	Upper	WT111A	13000	150000	9%
Chloride	Upper	WT111A	12000	250000	5%
Sulfate	Upper	WT111A	120000	250000	48%
Sulfate	Upper	WT114A	33000	250000	13%
1,1-Dichloroethane	Intermediate	WT114B	1.1	240	0.5%
1,1-Dichloroethane	Intermediate	WT114C	1.5	240	1%
Barium	Intermediate	WT114C	58 J	2000	3%
Manganese	Intermediate	WT114C	28	1140	2%
Sulfate	Intermediate	WT114C	76000	250000	30%
Carbon disulfide	Upper	WT115B	1.4 U	10000	0%
Arsenic	Upper	WT115B	1.0 U	10	10%
Manganese	Upper	WT115B	15 U	1140	1%



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 5 -

<i>Analyte</i>	<i>Aquifer</i>	<i>Well</i>	<i>September 2014 Concentration (µg/L)</i>	<i>GW RAO (µg/L)</i>	<i>Percentage of GW RAO</i>
Barium	Upper	WT115C	40 J / 39 J	2000	2%
Calcium	Upper	WT115C	100000 / 100000	250000	40%
Manganese	Upper	WT115C	57 / 56	1140	5%
Sulfate	Upper	WT116A	280000	250000	112%
Manganese	Upper	WT119B	110	1140	10%
Arsenic	Intermediate	WT120B	5.8	10	58%
Calcium	Intermediate	WT120B	73000	250000	29%
Manganese	Intermediate	WT120B	220	1140	19%
Sulfate	Intermediate	WT120B	40000	250000	16%
1,1-Dichloroethane	Upper	WT121A	1.5 / 1.6	240	1%
Calcium	Upper	WT121A	83000 / 85000	250000	33%
Manganese	Upper	WT121A	51 / 52	1140	4%
Chloride	Upper	WT121A	58000 / 58000	250000	23%
Benzene	Upper	WT122A	0.25 J	5	5%
Manganese	Intermediate	WT121B	31	1140	3%
Sulfate	Intermediate	WT122B	100000	250000	40%
Iron	Lower	WTE3	110	26000	0.4%

These decreasing trends are indicative of improving groundwater quality near the Site.

Increasing trends were identified in 3 percent of the data sets for 1,1-DCA , barium, carbon disulfide, chloride, cis-1,2-DCE , manganese, sodium, and vinyl chloride, in all three aquifers (mainly in the Upper and Intermediate Aquifers). The following table provides the increasing trends, the September 2014 concentration and a comparison to the GW RAOs:

<i>Analyte</i>	<i>Aquifer</i>	<i>Well</i>	<i>September 2014 Concentration (µg/L)</i>	<i>GW RAO (µg/L)</i>	<i>Percentage of GW RAO</i>
1,1-DCA	Upper	WT106A	3.5	240	1.5%
Barium	Intermediate	WT121B	450	2,000	22.5%



April 24, 2015

Reference No. 039611

- 6 -

<i>Analyte</i>	<i>Aquifer</i>	<i>Well</i>	<i>September 2014 Concentration (µg/L)</i>	<i>GW RAO (µg/L)</i>	<i>Percentage of GW RAO</i>
Carbon disulfide	Intermediate	WT120B	1.0	10,000	0.01%
Chloride	Intermediate	WT115C	45	250	18%
Chloride	Upper	WT101E	34	250	13.6%
cis-1,2-DCE	Upper	WT115C	0.52	70	0.7%
cis-1,2-DCE	Upper	WT116A	2.6	70	3.7%
Manganese	Upper	WT115A	530	1,070	50%
Manganese	Upper	WT116A	1,600	1,070	150%
Manganese	Upper	WT122A	820	1,070	77%
Manganese	Lower	WTE3	47	1,140	4%
Sodium	Intermediate	WT101D	21,000	150,000	14%
Sodium	Intermediate	WT102B	31,000	150,000	21%
Vinyl chloride	Upper	WT122A	1.5	2	75%
Vinyl chloride	Intermediate	WT106B	1.1	2	55%
Vinyl chloride	Intermediate	WT122B	0.89	2	44.5%

Vinyl chloride is a daughter product of the degradation of chlorinated solvents. Since its GW RAO is relatively low (2 microgram per litre [µg/L]) and close to the detection limit (1 µg/L), the recent detections of vinyl chloride are close to the GW RAO and increasing trends should be monitored closely. The most recent concentrations (September 2014) for other VOCs range from 0.7 to 3.7 percent of their respective GW RAOs and are therefore less critical. For inorganics, recent manganese concentrations in the samples collected from the Upper Aquifer wells where increasing trends are identified as close to or greater than the GW RAO (1,070 µg/L) while the other general chemistry and metals parameters are present at concentrations less than 22.5 percent of their respective GW RAOs.

Please refer to Attachment 2 for the trend analysis methodology, plots of the contaminant concentration versus time and tables detailing the trends analysis.



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 7 -

Comment No. 5

As assessment on whether further investigation/response action is warranted on those contaminants which have exceeded groundwater cleanup criteria (e.g., arsenic, and iron, etc.) located downgradient from Site boundaries. In particular, EPA and IDEM are concerned with off-site downgradient arsenic concentrations that are slightly above the cleanup level. While those arsenic concentrations appear to be stable, as evidenced by the sampling results since the time of the baseline readings in 2011, we would like confirmation that no groundwater exposure to arsenic above the cleanup level is occurring downgradient of monitoring wells WT106, WT121, or WT114; and,

CRA Response No. 5

CRA queried the Indiana Department of Natural Resources (IDNR) water well record database to review and identify the location of existing water supply wells in the vicinity of the Intermediate Aquifer arsenic plume. Figure 1 presents the results of the IDNR water well record database query. The IDNR water well record database does not provide reliable information regarding existing water well records for the following reasons:

- Some wells are not included in the database
- Well locations are not accurate
- Wells that are abandoned are not noted as such and/or have not been removed from the database

Therefore, to confirm the status of groundwater users near the Intermediate Aquifer arsenic plume, CRA, on behalf of the Himco Site Trust, will complete a door-to-door survey of residences and industrial/commercial properties near the Site, as shown on Figure 1. If CRA identifies any water supply wells during the survey, CRA will attempt to determine if a water well record exists for the well. CRA will also request permission from the property owner to collect a groundwater sample from each well for arsenic analysis.

In conjunction with the door-to-door survey, CRA will contact the City of Elkhart to determine if there is a map of city water mains and service connections, and/or a list of water ratepayers. CRA will review this list to identify the properties that are currently connected to the municipal drinking water supply.



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 8 -

Comment No. 6

Whether or not a change in frequency of sampling or list of contaminants being monitored is appropriate, given the data presented so far.

To the extent possible and minimizing the effort used for this activity, please use existing data from the annual groundwater monitoring reports (2011-Present).

CRA Response No. 6

CRA recommends that the GMP for the Site continues on a semi-annual basis and includes the following analytes:

Volatile Organic Compounds (VOCs)

- Benzene
- 1,1-Dichloroethane (1,1-DCA)
- cis-1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl chloride
- Carbon disulfide

Metals

- Aluminum
- Arsenic
- Barium
- Beryllium
- Calcium
- Iron
- Lead
- Manganese
- Mercury
- Sodium



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 9 -

General Chemistry

- Sulfate
- Chloride

CRA recommends that analysis of bis(2-ethylhexyl)phthalate be removed for the semi-annual GMP based on the following rationale.

The Consent Decree states that the Himco Site Trust should "prevent the use of groundwater that contains Site-related carcinogens and non-carcinogens in excess of MCLs."

Bis(2-ethylhexyl)phthalate was detected in 12 of 303 (4.0 percent) of the routine groundwater monitoring samples collected since March 2011. No samples had concentrations greater than its GW RAO of 6 µg/L since March 2011. Historically, bis(2-ethylhexyl) phthalate has been detected in groundwater samples that are widely dispersed across the Site, both laterally and vertically, and typically at low concentrations. This is not the pattern that a distinct high concentration source of SVOCs would create, which indicates that there is not a plume of bis(2-ethylhexyl)phthalate emanating from the Site. In fact, the presence of bis(2-ethylhexyl)phthalate in historic groundwater samples collected from monitoring wells at relatively large distances both upgradient and downgradient of the Site suggests that the detected concentrations in groundwater samples from the Site may not be completely, if at all, attributable to Site activities.

Bis(2-ethylhexyl)phthalate has also been detected in laboratory method blanks. When this occurs, it indicates that the sample detections are likely artifacts of the laboratory sample preparation and/or analysis procedure. Phthalic acid esters, such as bis(2-ethylhexyl)phthalate, are added to certain polymers to impart desirable physical properties to the final "plastic" product. Phthalates have long been recognized as common contaminants potentially found in the laboratory and field sampling equipment. Eliminating sources of bis(2-ethylhexyl) phthalate and other contaminants in labware and reagents used in the laboratory is an important component of the project laboratory's quality assurance program.

The presence of bis (2-ethylhexyl) phthalate in blank samples and in groundwater samples at relatively large distances both upgradient and downgradient of the Site indicates that the detected values at the Site are not attributable to Site activities.



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 10 -

Based on the above rationale, CRA concludes that further groundwater monitoring for bis(2-ethylhexyl) phthalate is no longer warranted at this time.

Remedy Implementation

Comment No. 7

An update on efforts to remediate elevated methane levels;

CRA Response No. 7

Upon completion of the Remedial Design/Remedial Action (RD/RA) construction in September 2012, CRA commenced quarterly soil gas monitoring in accordance with the Final Operations and Maintenance Plan (Final O&M Plan) (CRA, 2012). Upon observing methane concentrations at select soil gas probes greater than action levels in the Final O&M Plan, CRA commenced contingency soil gas monitoring. CRA implemented the Methane Investigation and Monitoring Plan (MIMP) in December 2012, as approved by USEPA on November 6, 2012. The purpose of the MIMP was to further delineate the potential extent of the methane detected within the vicinity of existing SGPs 107, 110, and 114, where methane was detected at elevated concentrations in September and October 2012. The MIMP consisted of installation of seven (7) new soil gas probes in December 2012 and weekly monitoring for 4 weeks.

CRA implemented two separate methane remedial action plans (MRAPs) to address continued elevated methane levels at the Site in 2013 and 2014.

Table 1 and Table 2 present the summary of the methane monitoring data for the soil gas probes and passive ventilation trench (PVT) from 2012 to present.

MRAP-2013

Methane and hydrogen sulfide were detected at concentrations greater than the action levels (5 percent and 4.4 percent by volume, respectively) in soil gas probes (SGPs) 107, 108, 109, 114, 115, 116, and 118 between September 2012 and January 2013. The MRAP-2013 involved the installation of two PVT sections along the south and west boundaries of the Site in 2013, as shown on Figures 2 and 3, respectively. The new PVTs were installed between soil gas probes SGPs 107, 108, 109, and SGPs 14, 15, and 16 along the southern portion of the landfill and SGPs



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 11 -

14, 15, and 16 and the western PVT between SGPs 114 and 119S/D. The MRAP-2013 construction began in October 2013 and was completed in November 2013.

Investigation of SGP-117S

CRA completed a bar hole investigation around SGP-117S in July 2014 to further delineate the extent of methane migration along the south property line. CRA observed that an existing natural peat layer with significant organic matter content was contributing to the presence of methane in the soil gas. Field data indicated that methane does not migrate more than 20 feet south towards the residence and SGP-27S/D remain at zero percent methane.

MRAP-2014

In response to USEPA's August 19, 2014 correspondence, the Himco Site Trust developed the MRAP-2014 to address methane conditions in the vicinity of SGP-117S, as well as methane concentrations along the east (at SGP-100) and west (at SGP-118) of the Site, respectively.

As approved by USEPA on September 30, 2014, CRA extended the PVT along the south and east boundaries of the Site. The PVTs were extended north along the western side of the landfill (north of PVT-21), a connective piece of PVT was installed (between PVTs 17 and 18) along the southern portion of the landfill that is also south of SGP-117S/D, and extended the PVT north along the eastern side of the landfill (north of PVT-1). The MRAP-2014 construction was completed in December 2014. Figures 4 through 7 present the locations of the PVT along the eastern, southeastern, south, and west, respectively.

Current Status

The SGP network has been monitored three times since the completion of the MRAP-2014 activities, and monthly sampling will continue until June 2015 (consisting of 6 monthly monitoring rounds). SGPs 114, 115, 116, and 118 had methane concentration greater than the action level (5 percent) during the January, February and March 2015 events; however SGPs 115, 116, and 118 are within the limit of waste. SGPs 119S and 119D, south of SGP-114, were below the action level (both read 0% methane). CRA will provide the soil gas data to USEPA following data collection and provide USEPA a summary report 30 days following the final soil gas monitoring in June 2015.



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 12 -

Comment No. 8

A discussion on ongoing operation and maintenance activities at the Site, including, but not limited to, discussion of the condition of the cap, the passive vent trench (PVT) system, fencing, monitoring wells, and gas probes, etc.; and

An indication if repairs to any remedy component described above have been necessary or are necessary.

CRA Response No. 8

The condition of the cover system, PVT system, and ancillary features are discussed below.

Cover System

The cover system is intact with vegetation growth over its entire surface. There are no significant indications of erosion, exposure of waste, or washouts. Minor repairs will be completed to the cover system as required by the O&M inspection results. The clean spoils from the PVT trenching activities will be placed on the crown of the landfill as per previous discussions with USEPA. The clean spoils will be covered with topsoil and seeded during the spring/summer of 2015.

PVT System

The PVT system is functioning as intended and has required minimal maintenance. The wind turbines require quarterly inspection for the beginnings of bird nests (straw entanglement at the top), and ice formation in the late fall that has prevented turbine movement. The PVT system has not required additional O&M since its installation.

Ancillary Features

Ancillary features of the Site consist of: the Site perimeter fence, soil gas probes, and Site access road.

The Site perimeter fence has been repaired periodically due to tree limbs falling on the top rail, and trespassers cutting the fence to gain access to the Site. The concrete pads for SGPs 102, 103, 108, 109, 110, 112, and 113 have been replaced. Minor repairs are required for SGP-108, SGP-109, SGP-111 and SGP-115 as the riser pipes have heaved slightly and restrict the protective casing lid, per the March 2015 O&M inspection. CRA will repair the soil gas probes in



**CONESTOGA-ROVERS
& ASSOCIATES**

April 24, 2015

Reference No. 039611

- 13 -

spring/summer of 2015. The PVT risers and vents are in generally good condition. The installation of the PVT vent boxes for PVT 22 through PVT 36, which were installed as part of the PVT extensions completed in December 2014, will be completed in spring/summer of 2015. CRA has placed additional stone the perimeter access road in some locations to address potholes. Additional repairs to the access road, per the March 2015 O&M inspection, are scheduled for spring/summer of 2015.

We trust that the information provided above meets your needs at this time. Please contact me at (519) 884-0510 if you have questions or require additional information.

Yours truly,

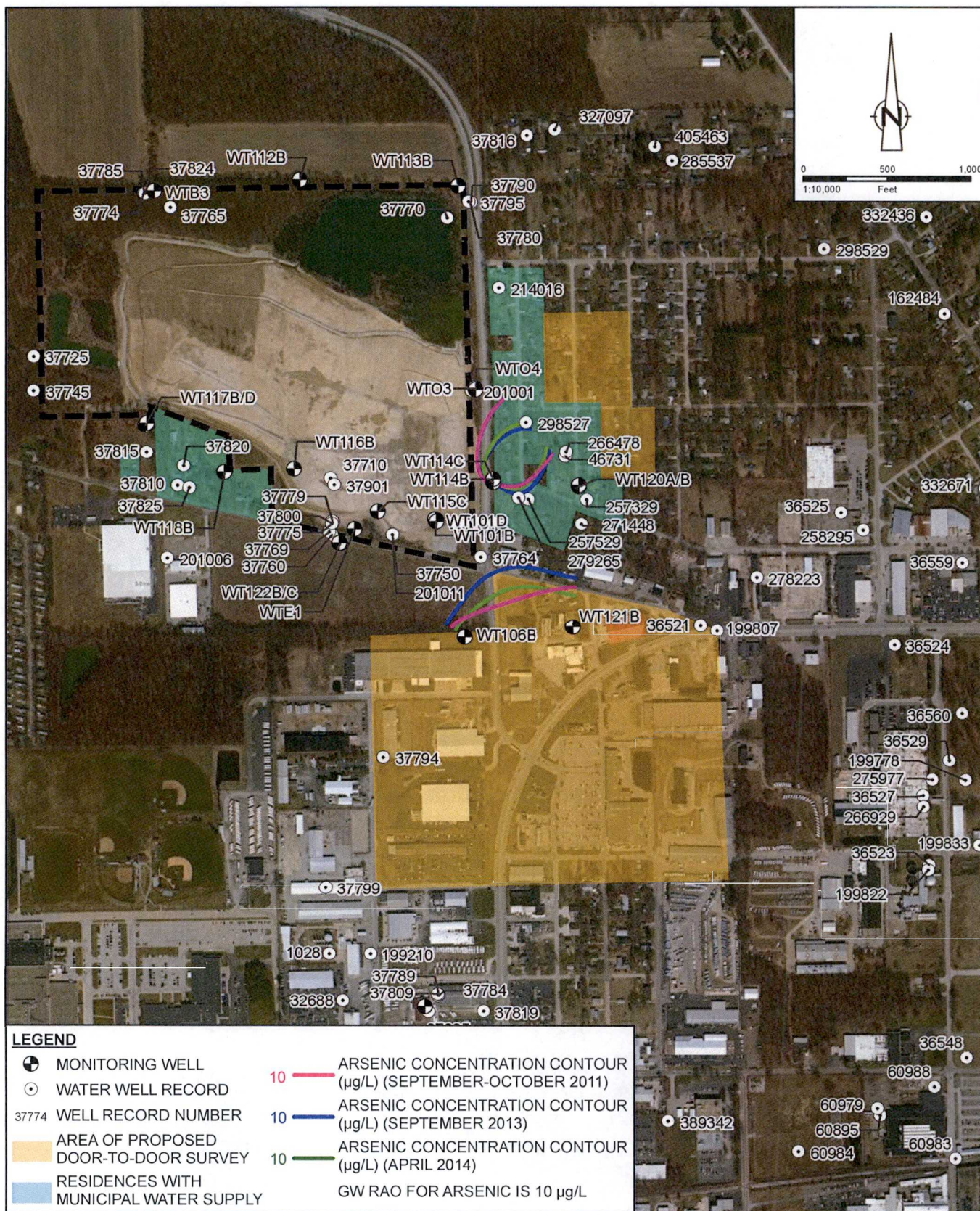
CONESTOGA-ROVERS & ASSOCIATES

Alan W. Van Norman, P. Eng.

HS/mg/54

Encl.

cc: John Matson, USEPA
Josh Decktor, Bayer HealthCare, Project Coordinator
Tom Lenz, Bayer HealthCare, Alternate Project Coordinator
Scott Krall, Bayer HealthCare
Doug Petroff, IDEM (2 copies)
Christopher Fassero, USACE (3 copies)
Alan Deal, CRA (via email)
Douglas Gatrell, CRA (via email)

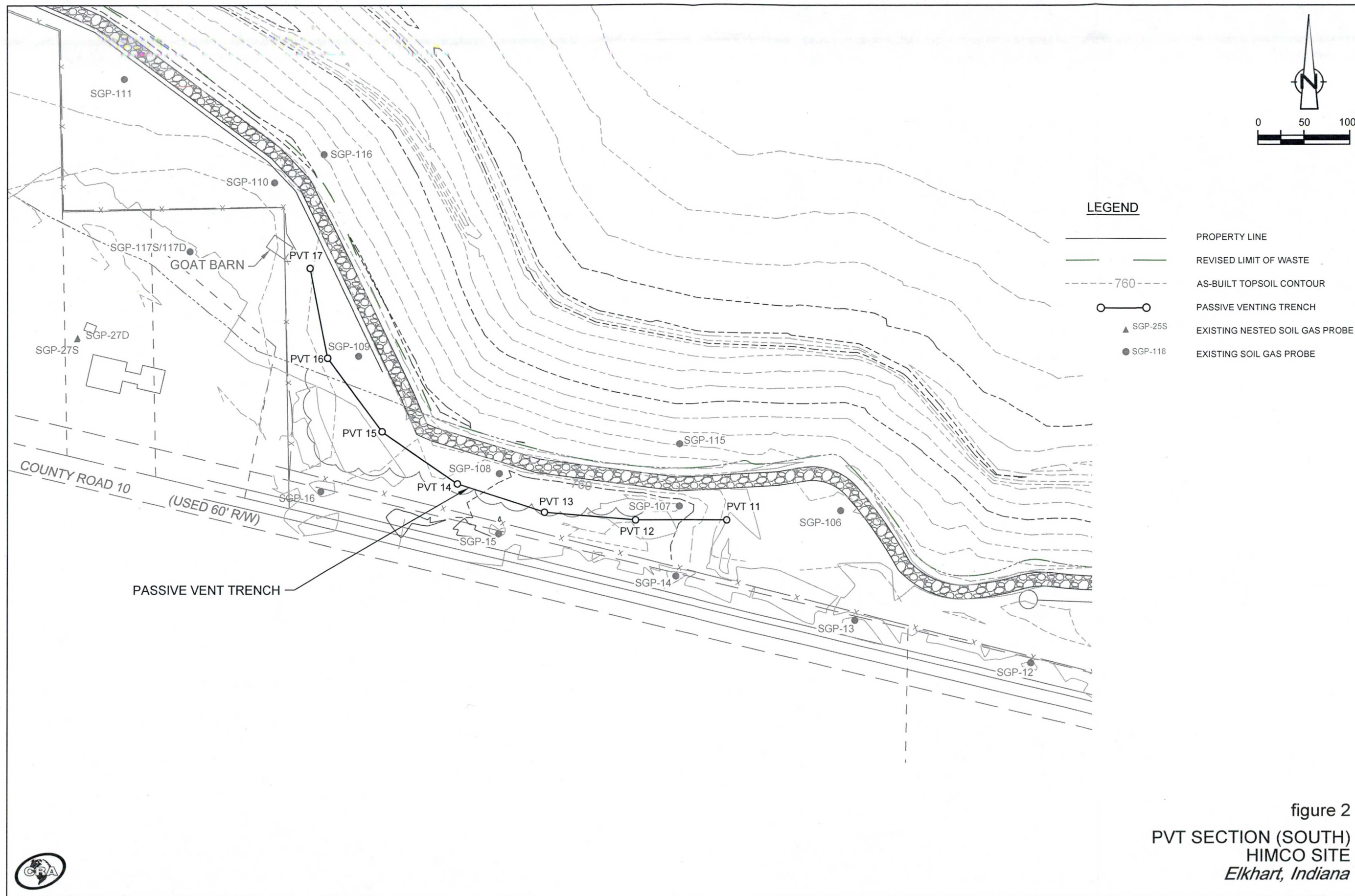


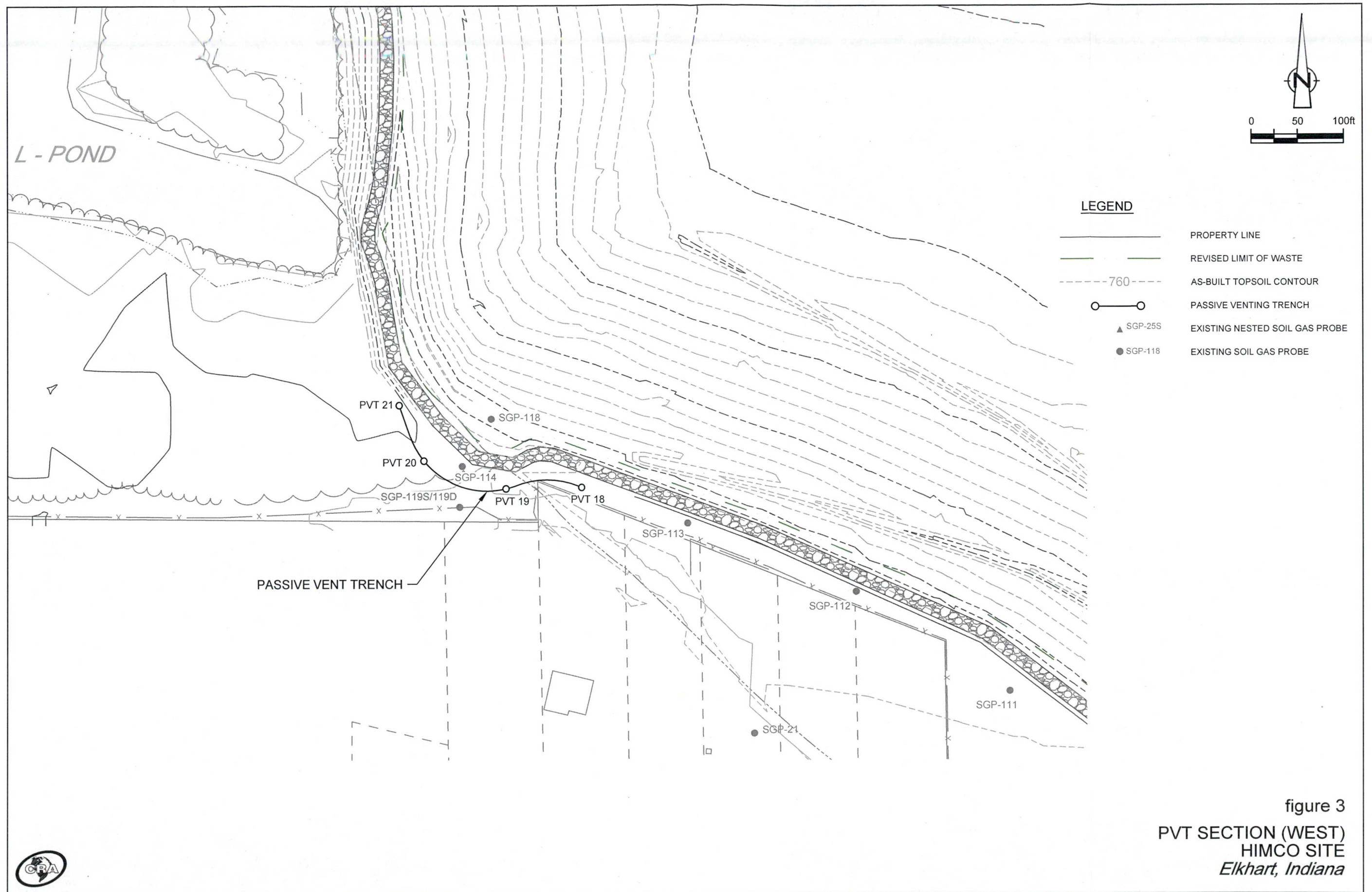
Source: Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation, Acquisition Date Unknown, Accessed 2015;
 Wells : Indiana Department of Natural Resources, Coordinate System: NAD 1983 UTM Zone 16N

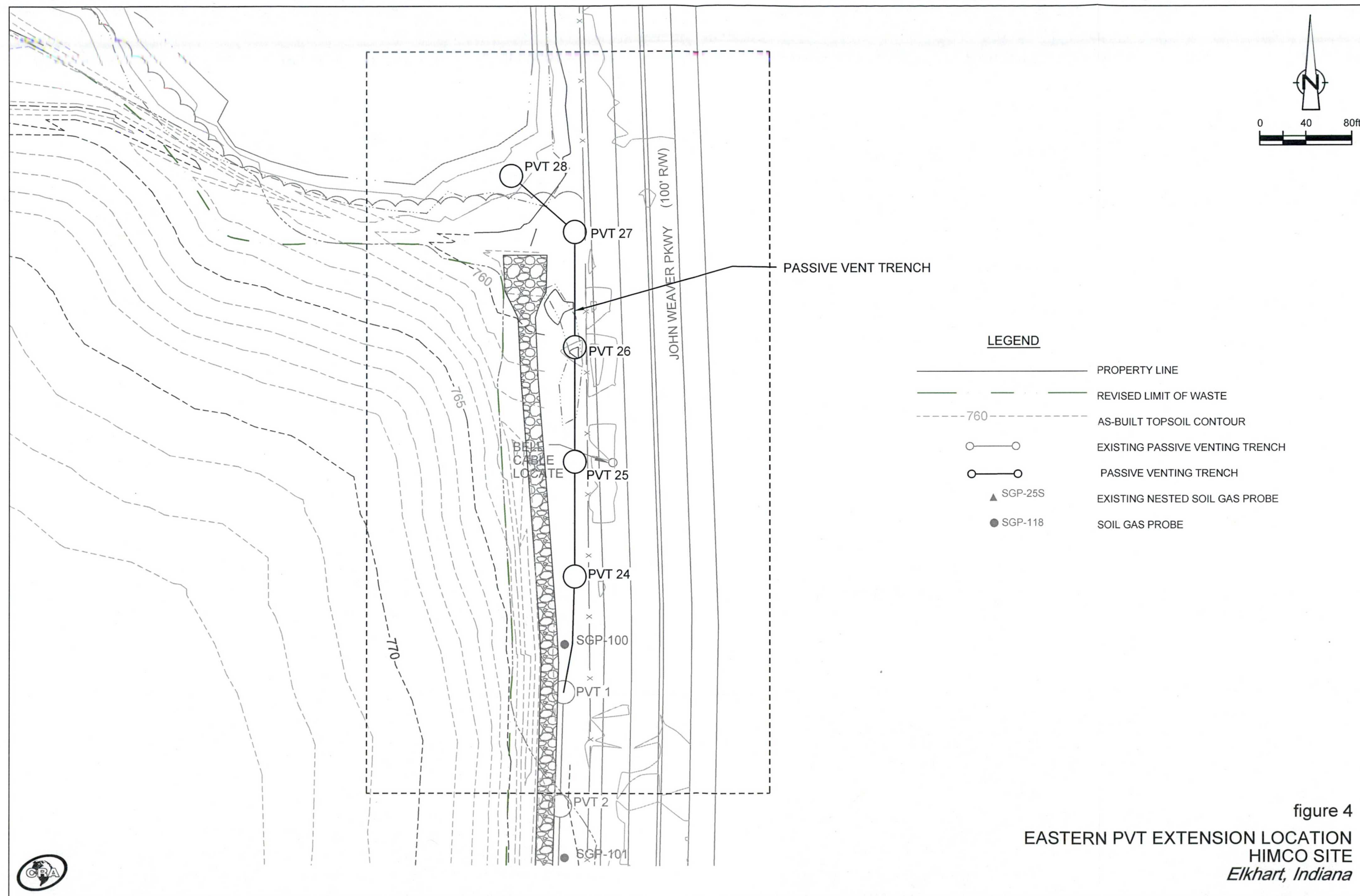


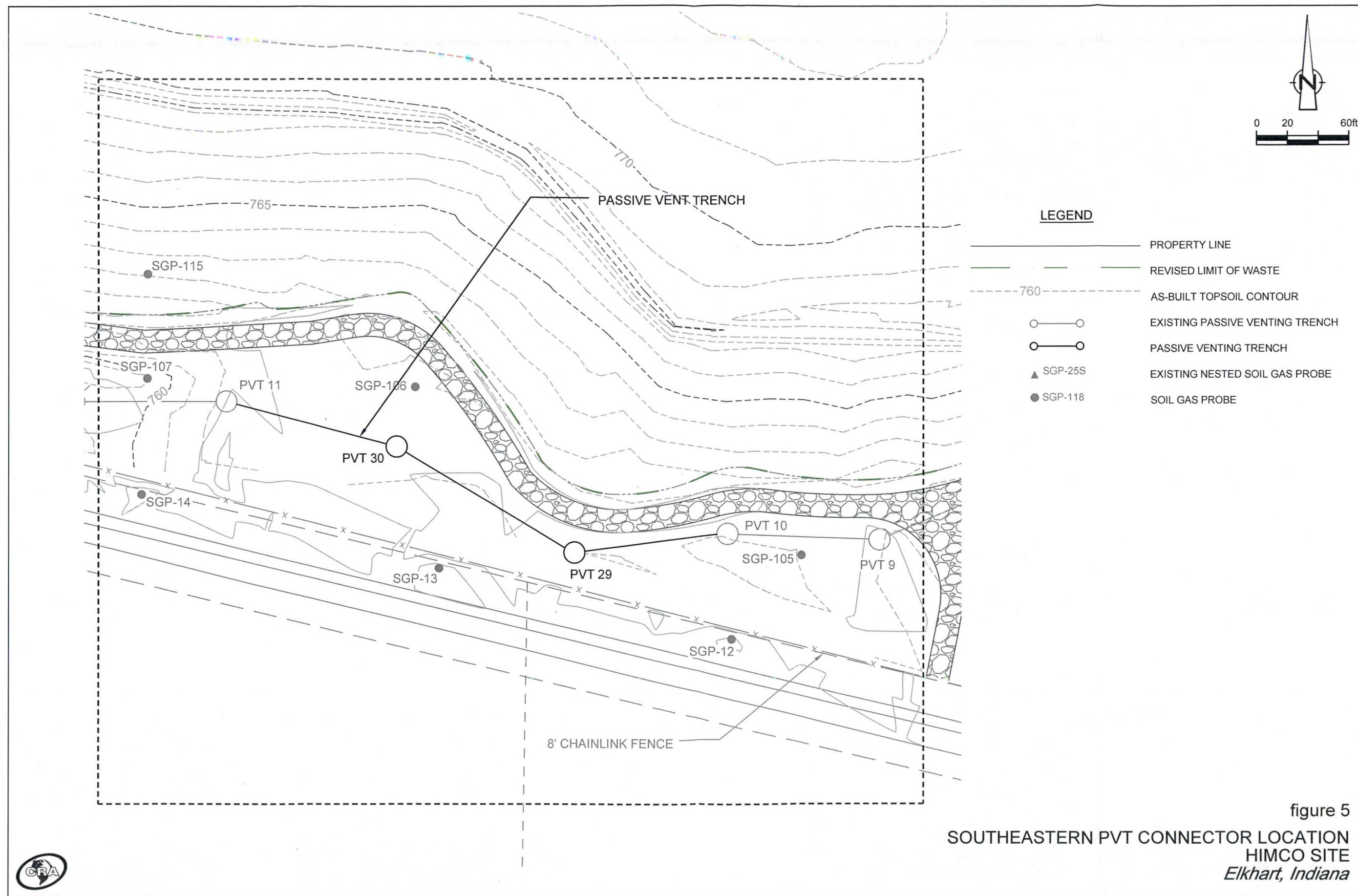
NOTE: CONTOURS WERE CREATED BY SURFER, VERSION 10, SURFACE MAPPING SYSTEM (GOLDEN SOFTWARE, INC., 2012).

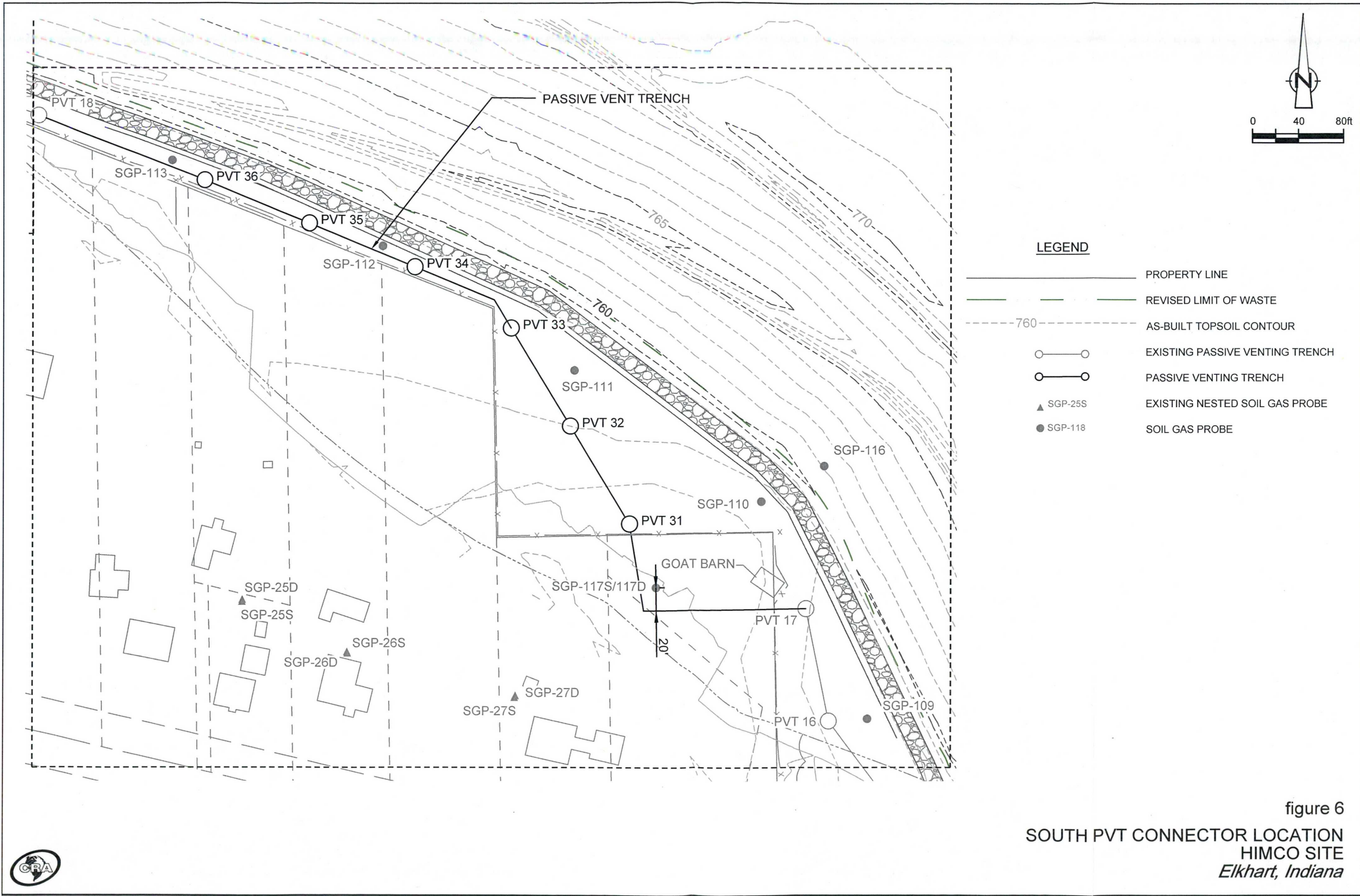
figure 1
 WELL LOCATION MAP
 HIMCO SITE
 Elkhart, Indiana











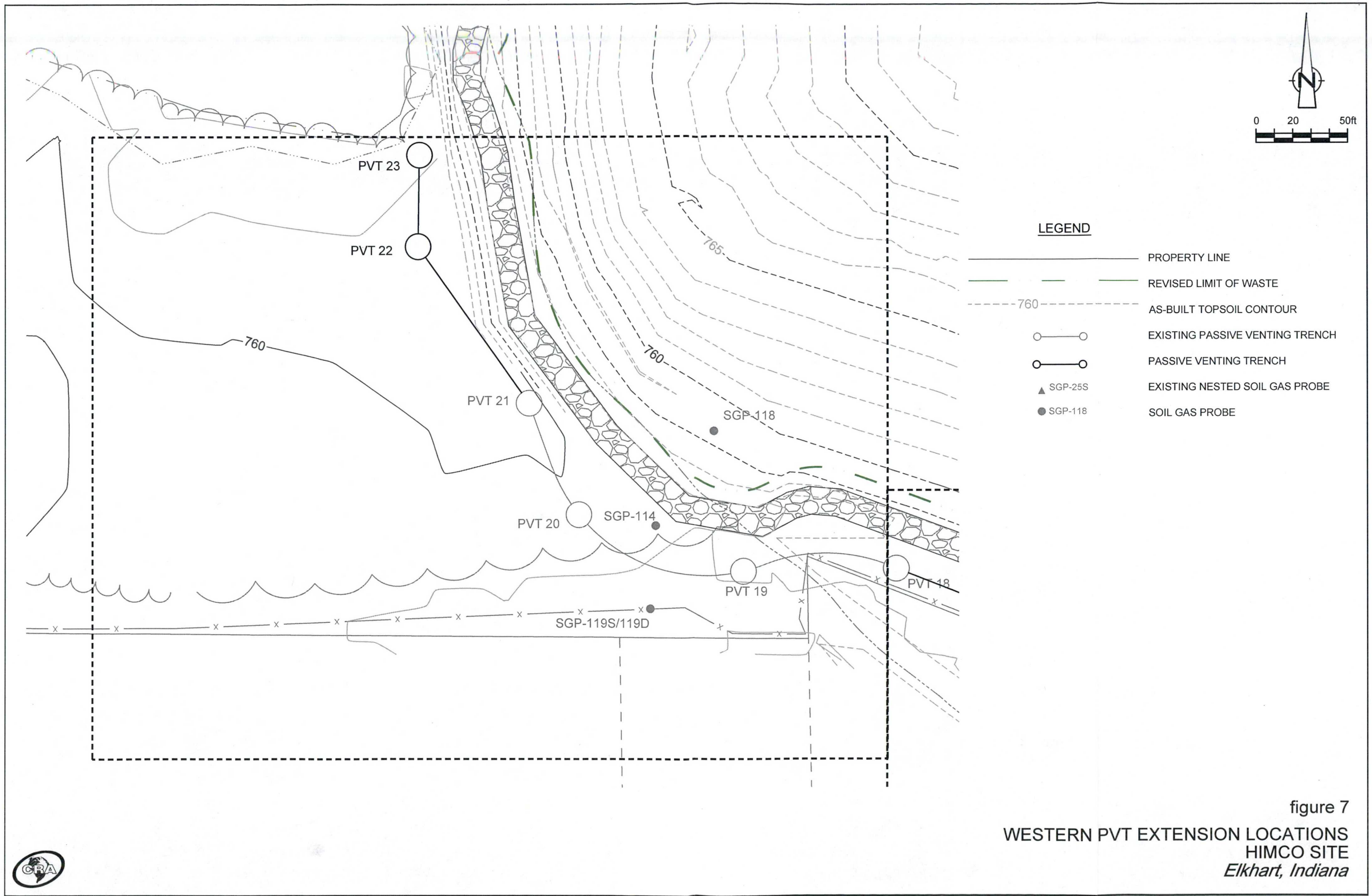


TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-100	9/21/2012	0.0	0.0	6.1	16.3	0
	12/28/2012	0.0	2.1	7.4	15.4	0
	3/27/2013	0.0	3.4	6.2	18.8	0
	6/27/2013	0.0	0.3	15.1	6.8	0
	9/25/2013	0.0	0.1	6.0	16.9	0
	12/23/2013	0.0	0.5	6.3	16.1	0
	3/27/2014	0.0	2.6	9.4	9.1	0
	6/26/2014	0.0	28.8	35.9	0.0	0
	6/27/2014	0.0	22.2	38.7	0.0	0
	6/30/2014	0.05	5.9	30.4	0.0	0
	7/1/2014	0.0	11.1	31.3	0.1	0
	7/2/2014	0.0	13.3	32.3	0.1	1
	7/3/2014	0.0	4.5	28.6	0.0	0
	7/7/2014	0.0	0.2	24.6	1.2	0
	7/8/2014	0.0	0.4	25.4	0.9	0
	7/9/2014	0.0	0.0	22.1	3.7	0
	7/10/2014	0.0	0.0	17.9	6.8	0
	7/11/2014	0.01	0.0	16.0	8.2	0
	7/17/2014	-0.01	0.0	15.7	7.9	0
	7/24/2014	0.0	0.0	8.1	14.0	1
	7/31/2014	0.0	0.0	7.6	14.2	0
	9/24/2014	0.0	0.0	11.4	11.9	0
	12/12/2014	0.0	0.0	14.3	8.7	0
	1/30/2015	-0.06	0.0	2.7	16.3	0
	2/24/2015	0.0	0.0	3.6	15.7	0
	3/30/2015	-0.03	0.3	3.6	16.2	0
SGP-101	9/21/2012	0.0	0.0	4.0	17.0	0
	12/28/2012	0.0	0.1	0.2	20.2	0
	3/27/2013	0.0	0.0	0.2	21.9	0
	6/27/2013	0.0	0.0	3.1	16.9	0
	9/25/2013	0.0	0.0	2.0	18.9	0
	12/23/2013	0.0	0.0	0.7	20.6	0
	3/27/2014	0.0	0.0	0.3	20.7	0
	6/26/2014	0.0	0.0	2.2	17.5	0
	6/30/2014	0.05	0.0	1.5	19.9	0
	7/1/2014	0.0	0.0	1.4	18.9	0
	7/2/2014	0.0	0.0	1.2	18.8	1
	7/3/2014	0.0	0.0	2.0	18.5	0
	9/24/2014	0.0	0.0	1.2	18.8	0
	12/12/2014	0.0	0.0	0.4	21.3	0
	1/30/2015	0.0	0.0	0.5	17.4	0
	2/24/2015	0.0	0.0	0.2	17.3	0
	3/30/2015	0.0	0.0	0.3	19.9	0
SGP-102	9/21/2012	0.0	0.0	3.8	16.1	0
	12/28/2012	0.0	0.0	0.9	20.0	0
	3/27/2013	0.0	0.0	0.7	21.6	0
	6/27/2013	0.0	0.0	2.9	16.3	0
	9/25/2013	0.0	0.0	2.9	15.8	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-103	12/23/2013	0.0	0.0	2.3	20.0	0
	3/27/2014	0.0	0.0	0.6	19.6	0
	6/26/2014	0.0	0.0	3.6	16.1	0
	6/30/2014	0.05	0.0	3.8	17.8	0
	7/1/2014	0.0	0.0	3.5	15.5	0
	7/2/2014	-0.01	0.0	3.5	16.1	0
	7/3/2014	0.0	0.0	3.4	17.5	0
	9/24/2014	0.0	0.0	2.2	17.6	0
	12/12/2014	0.0	0.0	1.7	19.3	0
	1/30/2015	-0.01	0.0	1.3	16.7	0
	2/24/2015	0.00	0.0	1.0	18.3	0
	3/30/2015	0.00	0.0	0.9	17.9	0
	9/21/2012	0.0	2.6	9.7	0.3	0
	12/28/2012	0.0	0.2	5.9	1.4	0
	3/27/2013	0.0	0.0	4.1	7.1	0
	6/27/2013	0.0	0.0	10.6	1.4	0
	9/25/2013	0.0	0.0	9.8	6.2	0
	12/23/2013	0.0	0.0	6.2	8.4	0
	3/27/2014	0.0	0.0	0.0	20.4	0
	6/26/2014	0.0	0.0	9.1	6.4	0
	6/30/2014	0.0	0.0	10.2	4.8	0
	7/1/2014	0.0	0.0	9.8	4.4	0
	7/2/2014	0.0	0.0	10.1	4.5	0
	7/3/2014	0.0	0.0	10.6	4.4	0
	9/24/2014	0.0	0.0	5.9	11.7	0
	12/12/2014	0.0	0.0	7.7	6.0	0
	1/30/2015	0.0	0.1	6.3	6.9	0
	2/24/2015	0.0	0.0	5.7	6.0	0
	3/30/2015	0.0	0.0	6.0	5.0	0
SGP-104	9/21/2012	0.0	0.0	8.4	12.1	0
	12/28/2012	0.0	0.2	3.4	12.6	0
	3/27/2013	0.0	0.0	2.5	18.8	0
	6/27/2013	-0.3	0.0	7.2	12.5	0
	9/25/2013	0.0	0.0	5.0	15.9	0
	12/23/2013	-0.02	0.0	1.9	19.8	0
	3/27/2014	0.0	0.0	0.6	20.4	0
	6/26/2014	0.0	0.0	5.8	13.2	0
	6/30/2014	0.0	0.0	7.2	11.6	0
	7/1/2014	0.0	0.0	6.8	10.8	0
	7/2/2014	0.0	0.0	7.3	10.1	0
	7/3/2014	0.01	0.0	7.6	10.3	0
	9/24/2014	0.0	0.0	4.4	18.3	0
	12/12/2014	0.0	0.0	2.1	19.2	0
	1/30/2015	-0.01	0.0	1.4	17.7	0
	2/24/2015	0.01	0.0	1.4	19.1	0
	3/30/2015	-0.02	0.0	1.2	18.7	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-105	9/21/2012	0.0	0.0	17.3	4.8	0
	12/28/2012	0.0	0.3	3.4	17.6	0
	3/27/2013	0.0	0.0	5.6	17.6	0
	6/27/2013	0.0	0.0	16.0	4.0	0
	9/25/2013	0.0	0.0	10.4	11.9	0
	12/23/2013	0.0	0.0	6.3	16.0	0
	3/27/2014	0.0	0.0	0.6	19.5	0
	6/26/2014	0.0	0.0	11.3	6.8	0
	6/30/2014	0.03	0.0	12.9	4.6	0
	7/1/2014	0.0	0.0	12.4	4.4	0
	7/2/2014	0.0	0.0	12.9	4.1	0
	7/3/2014	0.0	0.0	13.1	4.0	0
	9/24/2014	0.0	0.0	8.9	11.3	0
	12/12/2014	0.0	0.0	3.6	18.5	0
	1/30/2015	0.0	0.0	4.4	16.0	0
	2/24/2015	0.0	0.0	4.2	17.3	0
	3/30/2015	-0.02	0.0	4.1	17.3	0
SGP-106	9/21/2012	0.0	0.0	13.0	10.9	0
	12/28/2012	0.0	0.7	9.8	15.4	0
	3/27/2013	0.0	3.5	15.8	11.2	0
	6/27/2013	0.0	2.5	27.0	0.1	0
	9/25/2013	0.0	0.0	8.8	13.7	0
	12/23/2013	-0.01	0.0	6.1	16.6	0
	3/27/2014	0.05	0.7	15.4	5.5	0
	6/26/2014	0.01	13.0	29.3	0.1	0
	6/27/2014	0.02	15.2	32.2	0.0	0
	6/30/2014	0.03	11.4	31.5	0.0	0
	7/1/2014	0.03	13.6	31.0	0.1	0
	7/2/2014	0.0	5.0	12.4	8.6	0
	7/3/2014	0.0	8.5	28.8	0.0	0
	7/7/2014	0.01	9.5	29.5	0.0	0
	7/8/2014	0.0	10.3	30.1	0.0	0
	7/9/2014	-0.01	4.6	28.2	0.0	0
	7/10/2014	0.0	3.9	25.4	0.0	0
	7/11/2014	0.0	0.9	24.3	1.3	0
	7/17/2014	0.0	1.1	24.2	1.4	0
	7/24/2014	0.0	0.0	21.0	2.8	1
	7/31/2014	0.0	0.0	16.5	7.5	0
	9/24/2014	0.0	0.0	20.9	1.9	0
	12/12/2014	0.0	0.0	5.2	16.0	0
	1/30/2015	0.0	0.0	2.6	17.5	0
	2/24/2015	0.01	0.0	5.5	14.3	0
	3/30/2015	-0.04	0.0	11.4	10.7	0
SGP-107	9/21/2012	0.0	24.9	32.6	0.9	0
	9/24/2012	0.0	29.6	34.0	0.1	0
	9/25/2012	0.0	29.7	34.6	0.1	0
	9/26/2012	0.0	18.4	29.2	2.2	0
	9/27/2012	0.0	28.1	34.0	0.5	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	9/28/2012	0.0	28.2	33.6	0.0	0
	9/28/2012 ²	0.0	28.0	33.2	0.7	0
	10/1/2012 ³	0.0	29.1	34.6	0.0	0
	10/1/2012 ²	0.0	29.0	34.4	0.3	0
	10/2/2012	0.0	16.2	22.3	3.6	0
	10/3/2012	0.0	19.3	26.7	0.9	0
	10/4/2012	0.0	25.3	32.6	0.0	0
	10/5/2012	0.0	26.5	35.0	0.1	0
	10/12/2012	0.0	20.0	26.4	2.2	0
	10/19/2012	0.0	27.7	32.2	0.9	0
	12/28/2012	0.0	25.1	25.2	0.6	0
	1/3/2013	0.0	24.6	23.8	1.6	0
	1/10/2013	0.0	22.5	24.6	2.2	0
	1/17/2013	0.0	11.6	9.1	11.7	0
	2/28/2013	0.0	0.0	0.2	20.8	0
	3/27/2013	0.0	32.3	16.1	0.8	0
	4/25/2013	0.0	0.1	0.1	20.7	0
	5/29/2013	0.0	28.4	27.4	0.1	0
	6/27/2013	0.0	31.4	32.0	0.0	5
	7/25/2013	0.0	38.8	36.0	0.0	4
	8/29/2013	0.0	33.1	35.2	0.0	4
	9/25/2013	0.0	19.9	3.2	0.5	0
	11/27/2013	0.0	17.7	15.2	0.5	0
	12/17/2013	0.02	4.8	13.8	2.7	0
	12/23/2013	0.18	0.7	1.8	19.2	0
	1/29/2014	0.0	0.5	1.8	0.7	0
	2/25/2014	-0.01	0.4	1.0	4.3	0
	3/27/2014	1.38	0.2	0.3	16.2	0
	4/24/2014	0.01	7.58	13.8	11.6	5
	6/26/2014	-0.47	15.9	8.8	0.3	3
	6/27/2014	0.03	17.8	11.0	2.4	4
	6/30/2014	0.03	27.0	29.0	0.0	18
	7/1/2014	-0.6	22.3	18.4	0.9	23
	7/2/2014	-0.31	3.3	10.1	0.6	1
	7/3/2014	0.01	4.1	11.0	0.3	2
	7/7/2014	0.31	29.7	16.0	0.6	14
	7/8/2014	0.72	18.1	13.9	0.1	4
	7/9/2014	0.0	10.9	14.4	0.4	4
	7/10/2014	0.0	8.1	16.7	0.7	7
	7/11/2014	0.0	12.8	21.5	0.0	10
	7/17/2014	0.01	3.4	13.7	0.2	1
	7/24/2014	0.01	0.0	6.7	9.9	0
	7/31/2014	0.0	6.1	22.4	0.0	6
	9/24/2014	0.0	0.0	6.2	2.0	0
	12/12/2014	0.16	0.2	1.7	16.4	0
	1/30/2015	0.13	0.1	2.0	3.6	0
	2/24/2015	0.0	0.0	3.6	1.3	0
	3/30/2015	0.18	0.5	1.5	2.5	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-108	9/21/2012	0.0	0.0	9.8	6.7	0
	12/28/2012	1.2	8.6	3.1	2.1	0
	1/3/2013	0.0	8.4	2.7	3.3	0
	1/10/2013	0.0	7.8	2.7	6.6	0
	1/17/2013	0.0	0.5	0.0	19.8	0
	2/28/2013	0.0	0.0	0.2	21.1	0
	3/27/2013	0.0	15.7	5.9	3.6	0
	4/25/2013	0.0	7.6	3.0	11.7	0
	5/29/2013	0.0	6.6	11.5	0.0	0
	6/27/2013	0.0	0.0	8.3	5.0	0
	7/25/2013	0.0	0.2	10.4	4.5	20
	8/29/2013	0.0	0.0	11.1	4.7	1
	9/25/2013	0.0	0.0	3.5	15.4	0
	11/27/2013	0.0	0.8	1.4	19.8	0
	12/17/2013	0.05	9.7	7.3	2.3	0
	12/23/2013	-0.05	0.1	0.5	20.6	0
	1/29/2014	0.13	7.1	2.5	9.8	0
	2/25/2014	0.04	9.3	3.7	9.0	0
	3/27/2014	0.0	0.4	2.0	19.0	0
	4/24/2014	0.0	0.0	0.2	20.5	0
	6/26/2014	0.0	1.3	1.7	16.9	0
	6/30/2014	0.0	2.8	4.6	14.0	0
	7/1/2014	0.0	3.0	5.6	10.0	0
	7/2/2014	0.01	0.9	2.2	16.3	0
	7/3/2014	0.0	3.4	8.3	7.8	0
	9/24/2014	0.0	9.7	12.5	0.2	0
	12/12/2014	0.0	0.2	1.0	20.5	0
	1/30/2015	0.0	0.0	0.2	20.0	0
	2/24/2015	0.01	3.3	3.2	11.7	0
	3/30/2015	0.00	0.7	0.8	19.1	0
SGP-109	9/21/2012	0.0	1.3	8.4	6.3	0
	12/28/2012	1.5	8.8	5.7	0.3	0
	1/3/2013	0.0	3.4	3.4	12.1	0
	1/10/2013	0.0	5.9	5.2	4.0	0
	1/17/2013	0.0	9.2	5.4	1.1	0
	2/28/2013	0.0	12.7	5.1	1.4	0
	3/27/2013	0.0	2.3	2.6	12.9	0
	4/25/2013	0.0	0.2	0.2	16.4	0
	5/29/2013	0.0	7.4	8.5	0.7	0
	6/27/2013	0.0	11.5	9.1	0.1	0
	7/25/2013	0.0	6.1	10.8	0.3	0
	8/29/2013	0.0	8.7	10.6	0.0	0
	9/25/2013	0.0	10.6	8.1	0.6	0
	11/27/2013	0.0	9.4	7.0	0.0	0
	12/17/2013	0.03	0.9	6.6	0.2	0
	12/23/2013	-0.07	3.6	4.7	8.9	0
	1/29/2014	-0.04	9.6	4.9	0.3	0
	2/25/2014	0.04	11.0	5.6	0.0	0
	3/27/2014	0.17	4.4	2.0	14.0	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	3/28/2014	0.18	4.4	2.0	14.0	0
	4/24/2014	0.24	9.9	5.6	0.0	0
	6/26/2014	0.09	9.5	9.4	0.2	0
	6/27/2014	0.09	11.0	10.1	0.0	0
	6/30/2014	-0.19	9.3	10.3	0.0	0
	7/1/2014	0.06	7.3	9.3	0.2	0
	7/2/2014	0.01	7.7	9.8	0.2	0
	7/3/2014	0.0	9.4	10.5	0.1	0
	7/7/2014	0.01	9.4	10.8	0.1	0
	7/8/2014	0.02	9.5	11.1	0.0	0
	7/9/2014	-0.05	9.3	11.1	0.0	1
	7/10/2014	-0.01	8.9	10.6	0.0	0
	7/11/2014	0.00	9.2	10.7	0.1	0
	7/17/2014	-0.01	8.6	11.9	0.1	1
	7/24/2014	0.03	9.3	10.5	0.1	1
	7/31/2014	0.0	8.1	10.8	0.2	0
	8/6/2014	0.04	7.3	10.7	0.1	0
	8/13/2014	-0.38	7.2	11.2	0.3	0
	8/20/2014	-0.07	8.0	10.5	0.2	0
	8/29/2014	0.02	6.2	11.4	0.1	0
	9/4/2014	-0.06	5.0	8.3	5.4	0
	9/11/2014	-0.04	6.6	10.1	2.3	0
	9/19/2014	0.01	5.1	10.7	0.0	0
	9/24/2014	0.0	4.6	10.1	0.2	0
	10/1/2014	-0.02	0.1	6.1	8.8	0
	10/10/2014	0.03	3.2	9.7	0.0	0
	10/16/2014	0.06	4.6	9.3	0.0	0
	10/21/2014	-0.07	3.3	9.3	0.0	0
	10/30/2014	0.05	3.3	9.2	0.0	0
	11/5/2014	0.06	3.2	8.4	0.0	0
	11/11/2014	0.0	3.0	8.2	0.0	0
	11/17/2014	0.05	3.1	7.3	0.1	0
	11/25/2014	-0.15	2.6	7.0	0.1	0
	12/5/2014	0.0	3.1	7.9	0.0	0
	12/12/2014	0.10	2.7	6.3	0.1	0
	12/19/2014	0.06	2.7	6.1	0.0	0
	1/30/2015	0.03	1.1	5.4	0.5	0
	2/24/2015	0.11	1.6	5.2	0.0	0
	3/30/2015	0.06	1.4	5.0	0.0	0
SGP-110	9/21/2012	0.0	53.5	24.4	2.1	0
	9/24/2012	0.0	55.1	26.7	0.0	0
	9/25/2012	0.0	56.7	27.9	0.1	0
	9/26/2012	0.0	60.4	27.3	0.1	0
	9/27/2012	0.0	17.0	13.5	10.5	0
	9/28/2012	0.0	58.3	25.8	0.1	0
	9/28/2012 ²	0.0	38.2	22.3	3.9	0
	10/1/2012 ³	0.0	53.2	24.2	2.0	0
	10/1/2012 ²	0.0	34.2	22.2	4.7	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	10/2/2012	0.0	9.3	8.9	14.3	0
	10/3/2012	0.0	14.5	10.6	11.3	0
	10/4/2012	0.0	57.1	24.8	0.9	0
	10/5/2012	0.0	58.4	26.1	0.0	0
	10/12/2012	0.0	49.4	22.5	0.0	0
	10/19/2012	0.0	10.7	8.9	3.5	0
	12/28/2012	0.0	2.5	5.9	7.9	0
	1/3/2013	0.0	0.2	1.6	19.9	0
	1/10/2013	0.0	0.3	3.7	15.3	0
	1/17/2013	0.0	0.2	0.0	19.8	0
	2/28/2013	0.0	0.0	0.3	21.3	0
	3/27/2013	0.0	0.0	0.3	21.1	0
	4/25/2013	0.0	0.1	0.2	20.2	0
	5/29/2013	0.0	0.0	0.1	20.0	0
	6/27/2013	0.0	1.8	0.7	19.1	0
	7/25/2013	0.0	3.6	2.0	18.8	0
	8/29/2013	0.0	24.7	12.0	11.2	6
	9/25/2013	0.3	0.0	3.6	16.9	0
	11/27/2013	0.0	0.5	1.1	19.9	0
	12/17/2013	0.0	0.0	1.8	19.2	0
	12/23/2013	0.0	0.0	0.1	21.9	0
	1/29/2014	0.0	0.0	0.6	16.4	0
	2/25/2014	0.01	0.0	1.0	19.8	0
	3/27/2014	0.0	0.0	0.0	19.5	0
	3/28/2014	0.0	0.0	0.0	19.5	0
	4/24/2014	0.05	0.0	2.8	17.6	0
	6/26/2014	0.04	39.2	7.2	8.9	1
	6/27/2014	0.06	20.0	3.2	15.6	3
	6/30/2014	-0.77	34.0	7.2	11.0	1
	7/1/2014	0.14	26.1	6.0	11.1	0
	7/2/2014	0.05	27.6	6.5	11.8	1
	7/3/2014	0.15	22.8	5.0	0.0	0
	7/7/2014	0.14	26.3	6.8	12.8	1
	7/8/2014	0.0	0.4	0.1	20.6	0
	7/9/2014	0.0	0.0	0.1	20.1	0
	7/10/2014	0.0	0.0	0.2	19.8	0
	7/11/2014	0.0	0.0	0.1	20.2	0
	7/17/2014	0.0	0.0	0.9	17.6	2
	7/24/2014	0.0	0.4	4.2	11.7	0
	7/31/2014	0.0	0.4	5.2	10.2	0
	8/6/2014	0.0	0.0	2.4	15.8	0
	9/24/2014	0.0	0.0	2.9	13.3	0
	12/12/2014	0.0	0.0	0.1	21.2	0
	1/30/2015	-0.04	0.0	0.5	19.8	0
	2/24/2015	0.18	0.0	1.4	13.6	0
	3/30/2015	0.07	0.0	0.4	18.5	0
SGP-111	9/21/2012	0.0	0.0	7.1	11.4	0
	12/28/2012	0.0	0.3	0.1	21.3	0
	3/27/2013	0.0	0.0	0.2	22.2	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-112	6/27/2013	0.0	0.1	1.4	18.2	0
	9/25/2013	0.3	0.0	1.1	18.3	0
	12/23/2013	0	0.0	0.7	20.2	0
	3/27/2014	0.03	0.0	0.0	20.9	0
	6/26/2014	0.56	0.0	3.4	15.1	0
	6/30/2014	0.01	0.0	6.5	12.6	0
	7/1/2014	0.21	0.0	4.8	14.1	0
	7/2/2014	-0.08	0.0	5.6	14.5	0
	7/3/2014	0.0	0.0	3.6	17.5	0
	9/24/2014	0.0	0.0	5.6	11.7	0
	12/12/2014	0.0	0.0	0.1	21.1	0
	1/30/2015	-0.01	0.0	3.3	7.3	0
	2/24/2015	0.0	0.0	4.4	9.1	0
	3/30/2015	0.0	0.0	3.4	14.1	0
	9/21/2012	0.0	0.0	4.7	2.3	0
	12/28/2012	0.0	0.0	2.1	13.4	0
	3/27/2013	0.0	0.0	0.2	21.9	0
SGP-113	6/27/2013	0.0	0.0	4.9	11.3	0
	9/25/2013	0.0	0.0	2.8	13.3	0
	12/23/2013	0.0	0.0	1.2	13.4	0
	3/27/2014	1.47	0.0	0.0	20.9	0
	6/26/2014	0.97	0.0	5.0	9.6	0
	6/30/2014	-0.55	0.0	4.5	12.6	0
	7/1/2014	0.08	0.0	4.4	11.5	0
	7/2/2014	0.27	0.0	3.2	15.2	0
	7/3/2014	0.12	0.0	1.3	19.1	0
	9/24/2014	0.0	0.0	3.7	14.0	0
	12/12/2014	-0.06	0.0	0.1	21.0	0
	1/30/2015	0.01	0.0	3.5	4.3	0
	2/24/2015	0.0	0.0	4.6	5.5	0
	3/30/2015	0.02	0.0	3.2	17.2	0
	9/21/2012	0.0	1.4	7.6	2.0	0
	12/28/2012	0.0	0.0	3.5	9.2	0
	3/27/2013	0.0	1.9	3.5	0.7	0
	6/27/2013	0.0	3.0	5.3	5.0	0
	9/25/2013	0.0	0.0	1.1	17.8	0
	12/23/2013	0.0	0.0	1.5	17.5	0
	3/27/2014	2.12	0.0	0.0	20.9	0
	6/26/2014	0.0	0.0	5.9	4.2	0
	6/30/2014	-0.36	0.0	8.1	1.0	0
	7/1/2014	0.30	0.0	7.2	1.5	0
	7/2/2014	0.07	0.0	7.1	3.3	0
	7/3/2014	0.02	0.0	7.2	4.4	0
	9/24/2014	0.0	0.1	2.1	13.1	0
	12/12/2014	0.02	0.0	2.7	13.8	0
	1/30/2015	0.0	0.0	4.6	3.8	0
	2/24/2015	0.02	0.0	5.8	3.0	0
	3/30/2015	0.01	0.0	3.2	7.0	0

TABLE 1

Page 9 of 22

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-114	9/21/2012	0.0	24.9	29.7	0.4	0
	9/24/2012	0.0	24.8	28.5	0.0	0
	9/25/2012	0.0	25.0	29.9	0.0	8
	9/26/2012	0.0	24.1	28.8	1.1	10
	9/27/2012	0.0	23.9	29.0	1.3	10
	9/28/2012	0.0	23.5	28.2	1.3	8
	9/28/2012 ²	0.0	0.0	0.1	20.3	0
	10/1/2012 ³	0.0	24.5	29.4	0.0	7
	10/1/2012 ²	0.0	24.2	28.9	0.7	8
	10/2/2012	0.0	21.4	25.1	0.8	0
	10/3/2012	0.0	17.6	20.8	3.1	0
	10/4/2012	0.0	23.2	29.1	0.0	0
	10/5/2012	0.0	23.4	29.4	0.0	0
	10/12/2012	0.0	22.9	28.7	0.1	0
	10/19/2012	0.0	32.2	29.5	0.1	0
	12/28/2012	0.0	58.5	31.0	1.1	6
	1/3/2013	0.0	58.9	30.8	3.0	5
	1/10/2013	0.0	58.9	31.9	1.0	4
	1/17/2013	0.0	62.7	29.9	0.9	0
	2/28/2013	0.0	40.1	22.3	5.4	0
	3/27/2013	0.0	53.1	30.4	0.2	4
	4/25/2013	0.0	49.6	31.3	1.8	0
	5/29/2013	0.0	38.1	33.1	0.4	10
	6/27/2013	0.0	39.8	36.0	0.0	15
	7/25/2013	0.0	40.3	37.3	0.0	12
	9/25/2013	0.1	28.5	33.5	0.2	6
	11/27/2013	0.0	0.0	0.2	20.8	0
	12/17/2013	0.0	0.0	0.2	21.6	0
	12/23/2013	0.0	0.0	0.2	20.3	0
	1/29/2014	0.01	1.2	6.1	13.9	0
	2/25/2014	0.01	0.0	1.1	19.8	0
	3/27/2014	0.0	3.9	4.9	11.1	0
	4/24/2014	0.0	0.7	6.0	11.9	0
	6/26/2014	0.0	23.0	23.6	0.2	5
	6/27/2014	0.0	24.5	25.7	0.1	3
	6/30/2014	0.06	16.6	24.7	0.0	9
	7/1/2014	0.0	24.4	21.4	0.1	6
	7/2/2014	0.0	5.3	19.0	1.3	0
	7/3/2014	0.0	0.7	14.2	5.1	0
	7/7/2014	0.0	17.6	23.5	0.1	1
	7/8/2014	-0.01	18.9	24.5	0.2	1
	7/9/2014	-0.01	3.1	15.4	4.6	0
	7/10/2014	-0.01	1.6	15.9	2.9	1
	7/11/2014	-0.01	7	20.2	0.4	1
	7/17/2014	-0.01	27.7	26.0	0.2	0
	7/24/2014	0.0	20	16.8	7.3	1
	7/31/2014	0.0	23.5	27.9	0.0	0
	8/6/2014	0.0	18.4	18.0	7.2	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-115	8/13/2014	0.0	25.4	16.4	0.4	0
	8/20/2014	0.0	27.3	23.7	1.8	0
	8/29/2014	0.0	26.5	27.6	0.1	0
	9/4/2014	-0.01	38.7	26.5	2.5	0
	9/11/2014	0.0	49.3	25.3	3.7	0
	9/19/2014	0.0	39.3	30.8	0.0	0
	9/24/2014	0.0	37.7	26.8	0.0	6
	10/1/2104	0.01	41.2	29.7	0.0	0
	10/10/2014	0.01	53.4	29.5	0.0	0
	10/16/2014	0.02	68.4	28.4	0.0	0
	10/21/2014	0.0	54.9	28.8	0.0	0
	10/30/2014	0.0	45.3	28.3	0.0	0
	11/5/2014	0.02	39	25.7	0.0	0
	11/11/2014	0.01	46.4	25.3	0.0	0
	11/17/2014	0.01	41.1	26.9	0.0	0
	11/25/2014	0.0	57.9	24.3	0.5	0
	12/5/2014	0.0	49.2	27.8	0.0	0
	12/12/2014	0.0	38.6	19.4	1.0	0
	12/19/2014	0.01	38.5	21.3	0.0	0
	1/30/2015	0.0	18.7	18.5	0.1	0
	2/24/2015	0.05	16.7	16.6	0.0	0
	3/30/2015	-0.02	19.2	11.7	5.0	0
	12/28/2012	1.3	34.5	36.5	1.3	0
	1/3/2013	0.0	34.8	35.6	2.4	0
	1/10/2013	0.0	35.6	36.6	6.9	0
	1/17/2013	0.0	0.3	0.0	20.2	0
	2/28/2013	0.0	0.0	0.2	20.9	0
	3/27/2013	0.0	0.0	0.3	19.5	0
	4/25/2013	0.0	0.0	0.1	20.4	0
	5/29/2013	0.0	29.5	44.7	0.3	0
	6/27/2013	0.0	30.6	49.2	0.0	0
	7/25/2013	0.0	31.6	52.3	0.0	4
	8/29/2013	0.0	30.2	49.3	0.0	11
	9/25/2013	0.0	17.8	36.1	3.1	0
	11/27/2013	0.0	33.5	32.7	0.7	5
	12/17/2013	0.14	35.6	35.1	0.0	0
	12/23/2013	-0.39	7.1	11.3	14.0	0
	1/29/2014	0.09	37.1	29.6	0.0	0
	2/25/2014	0.18	37.6	28.4	0.0	0
	3/27/2014	0.62	35.3	26.3	1.8	0
	4/24/2014	0.25	33.2	28.0	0.0	0
	6/26/2014	0.26	37.0	34.4	0.2	0
	6/27/2014	0.27	43.2	42.0	0.0	0
	6/30/2014	0.26	32.2	37.1	0.0	0
	7/1/2014	0.51	33.7	37.5	0.1	0
	7/2/2014	-0.09	0.0	0.1	20.4	0
	7/3/2014	0.0	0.0	0.2	20.2	0
	7/7/2014	0.01	15.1	20.8	5.4	0
	7/8/2014	0.02	25.3	29.9	3.1	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-116	7/9/2014	-0.06	0.0	0.2	19.8	0
	7/10/2014	0.0	0.0	0.5	15.1	0
	7/11/2014	-0.01	3.3	7.4	0.1	0
	7/17/2014	-0.01	25.6	31.8	0.0	0
	9/24/2014	0.0	10.1	20.9	0.1	0
	12/12/2014	0.0	47.6	27.9	0.4	1
	1/30/2015	-0.04	43.6	24.5	0.2	1
	2/24/2015	0.25	44.2	22.5	0.0	1
	3/30/2015	-0.04	39.7	25.1	0.4	0
	12/28/2012	1.9	58.4	46.5	0.6	0
	1/3/2013	0.0	59.8	45.6	1.3	0
	1/10/2013	0.0	61.8	45.4	4.1	0
	1/17/2013	0.0	52.6	40.6	1.6	0
	2/28/2013	0.0	0.0	0.2	21.6	0
	3/27/2013	0.0	53.2	41.4	0.6	0
	4/25/2013	0.0	0.0	0.1	20.5	0
	5/29/2013	0.0	41.7	40.9	0.5	0
	6/27/2013	0.0	51.5	48.4	0.1	0
	7/25/2013	0.0	48.9	50.9	0.0	0
	8/29/2013	0.0	49.0	47.6	0.0	5
	9/25/2013	0.0	21.7	31.7	1.1	0
	11/27/2013	0.05	49.9	42.2	0.0	0
	12/17/2013	0.22	57.8	42.1	0.1	0
	12/23/2013	-0.50	35.6	29.4	5.4	0
	1/29/2014	0.17	57.3	39.6	0.0	1
	2/25/2014	0.44	44.6	30.4	0.0	2
	3/27/2014	0.75	44.6	30.4	4.4	0
	4/24/2014	0.44	51.4	38.4	0.0	3
	6/26/2014	0.59	50.6	49.1	0.2	6
	6/27/2014	0.46	46.0	54.2	0.0	7
	6/30/2014	0.49	46.1	47.1	0.1	12
	7/1/2014	0.75	45.9	46.8	0.2	13
	7/2/2014	-0.06	42.5	43.1	2.2	0
	7/3/2014	0.03	50.5	49.1	0.0	3
	7/7/2014	0.05	50.9	49.2	0.0	10
	7/8/2014	0.08	50.5	49.4	0.0	8
	7/9/2014	-0.04	42.5	41.7	2.3	1
	7/10/2014	-0.02	48.8	48.6	0.6	1
	7/11/2014	-0.01	49.5	47.6	0.3	1
	7/17/2014	-0.01	45.3	46.1	0.4	1
	9/24/2014	0.0	50.6	48.1	0.2	9
	12/12/2014	0.01	45.3	27.4	0.2	1
	1/30/2015	0.03	16.2	34.7	1.3	0
	2/24/2015	0.92	57	34.8	0.0	0
	3/30/2015	0.10	53.8	40.4	0.4	1
SGP-117S	12/28/2012	0.0	2.2	14.9	0.3	0
	1/3/2013	0.0	1.9	10.7	7.4	0
	1/10/2013	0.0	2.0	14.7	3.6	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	1/17/2013	0.0	2.5	13.5	0.7	0
	2/28/2013	0.0	0.2	1.4	14.7	0
	3/27/2013	0.0	3.2	12.0	0.0	0
	4/25/2013	0.0	4.6	12.3	0.9	0
	5/29/2013	0.0	4.0	14.5	0.0	0
	6/27/2013	0.0	3.7	15.5	0.3	0
	7/25/2013	0.0	4.3	18.2	0.1	0
	8/29/2013	0.0	3.4	19.7	0.0	1
	9/25/2013	0.0	2.6	15.5	1.8	0
	11/27/2013	-0.1	3.6	17.0	0.4	0
	12/17/2013	0.0	3.4	16.5	0.6	0
	12/23/2013	-0.07	3.3	14.7	0.2	0
	1/29/2014	0.02	3.0	13.9	0.0	0
	2/25/2014	0.03	2.9	11.1	0.7	0
	3/27/2014	0.12	3.1	7.2	9.3	0
	4/24/2014	0.13	6.2	12.5	0.1	0
	4/30/2014	0.0	3.3	8.6	1.8	nm
	5/1/2014	0.02	5.1	12.3	0.0	0
	5/2/2014	0.02	4.7	12.7	0.0	0
	5/3/2014	-0.08	5.1	13.0	0.0	0
	5/4/2014	0.0	4.9	13.2	0.0	0
	5/5/2014	0.10	4.7	13.2	0.0	0
	5/6/2014	0.0	5.0	13.5	0.0	0
	5/7/2014	0.0	3.7	12.6	0.0	0
	5/8/2014	0.0	4.9	12.4	0.0	0
	5/9/2014	0.05	4.9	13.7	0.0	0
	5/12/2014	0.0	6.5	14.8	0.0	0
	5/13/2014	0.05	5.0	15.3	0.0	0
	5/14/2014	0.0	4.7	15.2	0.0	0
	5/15/2014	0.10	4.1	14.2	0.1	nm
	5/16/2014	0.0	4.9	14.0	0.1	nm
	5/19/2014	0.0	5.2	15.8	0.0	0
	5/27/2014	0.0	5.4	14.4	0.0	0
	6/4/2014	0.08	5.7	15.6	0.0	0
	6/12/2014	0.01	5.9	16.5	0.0	0
	6/19/2014	-0.04	5.6	17.7	0.0	0
	6/26/2014	0.03	4.9	16.0	0.2	0
	6/30/2014	0.10	3.9	16.3	0.1	0
	7/1/2014	0.0	5.6	18.1	0.0	0
	7/2/2014	-0.01	5.5	18.0	0.1	0
	7/3/2014	0.0	5.4	18.0	0.1	0
	7/7/2014	0.02	5.5	18.5	0.0	0
	7/17/2014	0.0	4.7	18.7	0.0	1
	7/24/2014	0.01	2.5	8.7	10.4	0
	7/31/2014	0.01	4.6	21.1	0.0	0
	8/6/2014	0.02	4.3	20.5	0.0	0
	8/13/2014	0.01	4.3	20.2	0.1	0
	8/20/2014	-0.05	4.6	19.8	0.0	0
	8/29/2014	0.01	4.1	20.2	0.0	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-117D	9/4/2014	-0.05	4.8	21.4	0.0	0
	9/11/2014	-0.03	4.6	16.2	4.8	0
	9/19/2014	0.02	4.2	21.7	0.0	0
	9/24/2014	0.0	3.8	19.2	0.1	0
	10/1/2104	-0.05	4.3	21.1	0.0	0
	10/10/2014	0.04	4.5	19.8	0.0	0
	10/16/2014	0.08	6.7	18.6	0.0	0
	10/21/2014	-0.02	4.6	18.3	0.0	0
	10/30/2014	0.05	4.1	19.0	0.0	0
	11/5/2014	0.04	4.1	18.0	0.1	0
	11/11/2014	-0.08	3.8	17.0	0.0	0
	11/17/2014	0.0	3.6	17.7	0.2	0
	11/25/2014	-0.01	3.6	16.6	0.0	0
	12/5/2014	0.04	3.8	16.9	0.0	0
	12/12/2014	-0.04	3.7	15.4	0.0	0
	12/19/2014	0.0	3.4	15.1	0.0	0
	1/30/2015	0.0	0.9	12.8	0.3	0
	2/24/2015	0.01	0.6	12.1	0.0	0
	3/30/2015	-0.05	0.1	13.4	0.0	0
	12/28/2012	0.0	1.5	15.8	0.5	0
	1/3/2013	0.0	1.4	10.6	6.7	0
	1/10/2013	0.0	1.3	9.4	11.2	0
	1/17/2013	0.0	1.4	9.0	7.2	0
	2/28/2013	0.0	0.3	2.3	13.8	0
	3/27/2013	0.0	0.1	1.4	18.6	0
	4/25/2013	0.0	0.2	2.9	16.9	0
	5/29/2013	0.0	0.0	0.1	20.8	2
	6/27/2013	0.0	0.2	4.1	15.1	(5)
	7/25/2013	0.0	0.3	4.6	16.1	0
	8/29/2013	0.0	0.5	6.9	14.7	0
	9/25/2013	0.0	2.1	17.0	0.4	7
	11/27/2013	-0.1	2.6	18.0	0.7	0
	12/17/2013	0.0	2.4	17.0	0.9	0
	12/23/2013	-0.05	2.5	14.8	0.7	0
	1/29/2014	0.01	1.5	9.1	6.3	1
	2/25/2014	-0.01	0.1	0.1	22.5	0
	3/27/2014	0.30	0.1	0.0	20.8	0
	4/24/2014	-0.18	0.2	0.2	21.1	0
	4/30/2014	-16.1	0.0	0.9	20.7	nm
	5/1/2014	-0.09	0.1	0.1	20.9	0
	5/2/2014	-0.34	0.0	0.7	20.6	0
	5/3/2014	0.0	0.1	0.9	20.4	0
	5/4/2014	0.0	nm	nm	nm	nm
	5/5/2014	0.0	nm	nm	nm	nm
	5/6/2014	-4.25	nm	nm	nm	nm
	5/7/2014	0.0	nm	nm	nm	nm
	5/8/2014	0.0	nm	nm	nm	nm
	5/9/2014	0.0	nm	nm	nm	nm
	5/12/2014	0.05	nm	nm	nm	nm

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	5/13/2014	0.0	nm	nm	nm	nm
	5/14/2014	0.0	nm	nm	nm	nm
	5/15/2014	0.09	nm	nm	nm	nm
	5/16/2014	0.0	nm	nm	nm	nm
	5/19/2014	0.0	nm	nm	nm	nm
	5/27/2014	0.0	nm	nm	nm	nm
	6/4/2014	-0.04	nm	nm	nm	nm
	6/12/2014	0.0	nm	nm	nm	nm
	6/19/2014	0.02	nm	nm	nm	nm
	6/26/2014	-4.70	nm	nm	nm	nm
	6/30/2014	0.20	nm	nm	nm	nm
	7/1/2014	-0.14	nm	nm	nm	nm
	7/2/2014	-0.14	nm	nm	nm	nm
	7/3/2014	-0.15	nm	nm	nm	nm
	7/7/2014	2.22	nm	nm	nm	nm
	7/17/2014	1.64	nm	nm	nm	nm
	7/24/2014	0.07	0.0	0.0	20.6	0
	7/31/2014	0.0	0.0	4.3	20.1	0
	8/6/2014	-0.25	0.0	0.0	20.6	0
	8/13/2014	-0.02	0.0	0.0	20.8	0
	8/20/2014	-0.20	0.0	0.1	20.2	0
	8/29/2014	-1.00	0.0	0.1	20.4	0
	9/4/2014	-0.30	0.0	0.1	20.7	0
	9/11/2014	-0.52	0.0	0.0	21.7	0
	9/19/2014	-0.19	0.0	4.2	18.9	0
	9/24/2014	0.0	0.0	0.2	21.2	0
	10/1/2014	0.0	0.0	7.8	12.9	0
	10/10/2014	-0.12	0.0	0.1	21.1	0
	10/16/2014	-0.24	0.0	1.6	20.0	0
	10/21/2014	-0.06	0.0	2.4	20.3	0
	10/30/2014	-0.12	0.0	2.8	19.1	0
	11/5/2014	-0.23	0.0	2.2	21.3	0
	11/11/2014	-0.31	0.0	0.1	20.5	0
	11/17/2014	-0.17	0.0	0.0	21.6	0
	11/25/2014	0.0	0.1	0.0	21.5	0
	12/5/2014	-0.10	0.0	0.0	21.0	0
	12/12/2014	0.0	0.0	0.2	20.7	0
	12/19/2014	-0.04	0.0	0.1	22.1	0
	1/30/2015	-0.07	0.0	0.1	21.6	0
	2/24/2015	0.04	0.0	0.1	21.2	0
	3/30/2015	-0.17	0.0	0.1	20.9	0
SGP-118	12/28/2012	0.0	60.0	41.4	1.2	0
	1/3/2013	0.0	61.1	41.5	1.1	0
	1/10/2013	1.9	0.3	0.0	19.7	0
	1/17/2013	0.0	0.2	0.0	21.3	0
	2/28/2013	-1.2	0.0	0.2	21.7	0
	3/27/2013	0.0	0.0	0.2	21.9	0
	4/25/2013	-1.4	0.0	0.1	20.6	0
	5/29/2013	0.0	46.4	40.0	1.7	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	6/27/2013	1.4	52.0	47.2	0.2	7
	7/25/2013	0.9	49.5	49.6	0.0	7
	8/29/2013	0.0	48.4	49.1	0.1	2
	9/25/2013	0.0	49.7	48.6	0.1	2
	11/27/2013	0.3	55.3	44.7	0.0	7
	12/17/2013	0.3	59.4	39.3	1.3	5
	12/23/2013	-0.66	41.4	31.4	2.2	0
	1/29/2014	-0.05	12.1	9.4	14.5	0
	2/25/2014	0.55	43.8	30.2	0.0	0
	3/27/2014	0.70	60.4	36.5	0.0	0
	4/24/2014	0.60	56.9	40.5	0.0	2
	6/26/2014	0.85	50.7	49.1	0.2	11
	6/27/2014	0.66	44.6	55.5	0.0	10
	6/30/2014	0.74	44.1	45.2	0.0	9
	7/1/2014	1.12	50.1	49.9	0.2	13
	7/2/2014	0.03	43.2	46.1	0.1	3
	7/3/2014	0.17	35.7	42.9	0.0	0
	7/7/2014	0.15	50.6	49.3	0.0	2
	7/8/2014	0.22	50.1	49.8	0.0	9
	7/9/2014	-0.03	38.5	44.4	0.1	1
	7/10/2014	-0.02	24.9	36.4	0.1	1
	7/11/2014	-0.01	44.8	46.6	0.1	1
	7/17/2014	0.0	48.9	48.1	0.1	2
	9/24/2014	1.00	50.5	46.7	0.1	5
	12/12/2014	0.20	44.3	32.8	0.3	0
	1/30/2015	0.12	12.8	9.8	8.9	0
	2/24/2015	0.30	51.5	30.6	0.0	1
	3/30/2015	0.13	34.5	27.8	2.6	0
SGP-119S	12/28/2012	0.0	4.8	7.6	15.3	0
	1/3/2013	0.0	4.0	7.2	16.0	0
	1/10/2013	0.0	2.6	6.2	16.0	0
	1/17/2013	0.0	10.4	10.5	14.5	0
	2/28/2013	0.0	6.9	7.7	17.2	0
	3/27/2013	0.0	3.0	5.4	18.8	0
	4/25/2013	0.0	8.0	10.6	14.8	0
	5/29/2013	0.0	0.0	4.2	16.9	0
	6/27/2013	0.0	0.0	6.4	14.1	0
	7/25/2013	0.0	0.0	5.9	15.6	0
	8/29/2013	0.0	0.0	3.7	16.6	0
	9/25/2013	0.0	0.0	3.8	17.8	0
	11/27/2013	0.0	0.0	3.0	18.2	0
	12/17/2013	0.0	0.0	2.5	15.9	0
	12/23/2013	0.0	0.0	2.2	18.6	0
	1/29/2014	0.02	0.0	2.3	21.0	0
	2/25/2014	0.0	0.0	1.7	19.9	0
	3/27/2014	0.0	0.0	0.5	20.7	0
	4/24/2014	0.0	0.0	1.4	19.2	0
	6/26/2014	0.0	0.0	4.6	15.2	0
	6/30/2014	0.03	0.0	3.9	17.2	0

TABLE 1

SOIL GAS MONITORING DATA HIMCO SITE ELKHART, INDIANA						
Location	Date	Pressure (in H ₂ O)	Gas Quality/ Methane % ¹	Gas Quality/Combustible Gas Concentrations CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-119D	7/1/2014	0.0	0.0	3.6	15.4	0
	7/2/2014	0.0	0.0	4.1	16.6	0
	7/3/2014	0.0	0.0	4.3	17.1	0
	9/24/2014	0.0	0.0	2.9	18.5	0
	12/12/2014	0.0	0.0	1.5	19.4	0
	1/30/2015	0.0	0.0	2.6	17.2	0
	2/24/2015	0.03	0.0	2.7	18.7	0
	3/30/2015	0.00	0.0	1.4	19.0	0
	12/28/2012	0.0	6.8	12.4	11.5	0
	1/3/2013	0.0	5.3	4.4	11.2	0
	1/10/2013	0.0	3.8	11.2	13.0	0
	1/17/2013	0.0	15.6	15.3	10.0	0
	2/28/2013	0.0	7.8	9.2	14.1	0
	3/27/2013	0.0	4.4	8.1	17.0	0
	4/25/2013	0.0	7.4	6.5	13.0	0
	5/29/2013	0.0	0.0	5.2	16.4	0
	6/27/2013	0.0	0.0	7.7	13.2	0
	7/25/2013	0.0	0.0	8.1	14.2	0
	8/29/2013	0.0	0.0	5.1	15.5	0
	9/25/2013	0.0	0.0	5.1	16.6	0
	11/27/2013	0.0	0.0	3.4	17.6	0
	12/17/2013	0.0	0.0	3.2	15.5	0
	12/23/2013	0.0	0.0	2.7	18.4	0
	1/29/2014	0.0	0.0	2.5	20.7	0
	2/25/2014	0.01	0.0	1.9	19.8	0
	3/27/2014	0.0	0.0	0.3	20.7	0
	4/24/2014	0.0	0.0	1.4	19.1	0
	6/26/2014	0.0	0.0	4.5	15.0	0
	6/30/2014	0.0	0.0	4.5	16.6	0
	7/1/2014	0.0	0.0	4.3	15.0	0
	7/2/2014	0.0	0.0	4.5	16.4	0
	7/3/2014	0.0	0.0	4.8	16.7	0
	9/24/2014	0.0	0.0	3.7	17.9	0
	12/12/2014	0.0	0.0	1.9	19.0	0
	1/30/2015	0.0	0.0	2.7	17.0	0
	2/24/2015	0.0	0.0	2.8	18.7	0
	3/30/2015	0.0	0.0	1.7	18.7	0
SGP-13	9/24/2012	0.0	0.0	0.7	19.7	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.5	19.8	0
	9/27/2012	0.0	0.0	0.6	19.8	0
	9/28/2012	0.0	0.0	0.5	19.9	0
	10/1/2012	0.0	0.0	0.6	19.8	0
	10/2/2012	0.0	0.0	0.5	19.6	0
	10/3/2012	0.0	0.1	0.8	19.5	0
	10/4/2012	0.0	0.0	0.6	19.6	0
	10/5/2012	0.0	0.0	0.6	20.1	0
	10/12/2012	0.0	0.0	0.5	19.7	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	10/19/2012	0.0	0.0	0.5	20.9	0
	12/28/2012	0.0	0.0	0.4	20.8	0
	1/3/2013	0.0	0.0	0.0	20.7	0
	1/10/2013	0.0	0.0	0.0	19.9	0
	1/17/2013	0.0	0.0	0.0	20.0	0
	2/28/2013	0.0	0.0	0.4	21.5	0
	3/27/2013	0.0	0.0	0.3	21.9	0
	4/25/2013	0.0	0.0	0.1	20.8	0
	5/29/2013	0.0	0.0	0.2	21.9	0
	6/27/2013	0.0	0.0	1.0	18.6	0
	7/25/2013	0.0	0.0	1.0	19.5	0
	8/29/2013	0.0	0.0	0.8	19.7	0
	9/25/2013	0.0	0.0	0.7	19.7	0
	11/27/2013	0.0	0.0	0.7	20.5	0
	12/17/2013	0.0	0.0	0.5	20.6	0
	12/23/2013	0.0	0.0	0.5	20.9	0
	1/29/2014	0.0	0.0	0.5	19.6	0
	2/25/2014	0.02	0.0	0.9	20.1	0
	3/27/2014	0.0	0.0	0.0	20.5	0
	4/24/2014	0.0	0.0	0.5	20.5	0
	6/26/2014	0.0	0.0	1.6	18.3	0
	6/30/2014	0.08	0.0	1.6	20.1	0
	7/1/2014	0.0	0.0	1.9	18.7	0
	7/2/2014	0.0	0.0	1.8	19.0	0
	7/3/2014	0.0	0.0	1.3	19.4	0
	9/24/2014	0.0	0.0	0.8	18.5	0
	12/12/2014	0.0	0.0	0.4	19.7	0
	1/30/2015	0.0	0.0	0.3	20.6	0
	2/24/2015	0.0	0.0	0.6	18.2	0
	3/30/2015	0.0	0.0	0.5	20.7	0
SGP-14	9/24/2012	0.0	0.0	0.6	19.6	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.6	19.8	0
	9/27/2012	0.0	0.0	0.6	19.9	0
	9/28/2012	0.0	0.0	0.6	20.1	0
	10/1/2012	0.0	0.0	0.7	19.9	0
	10/2/2012	0.0	0.0	0.6	19.8	0
	10/3/2012	0.0	0.0	0.6	19.9	0
	10/4/2012	0.0	0.0	0.6	19.5	0
	10/5/2012	0.0	0.0	0.5	20.3	0
	10/12/2012	0.0	0.0	0.7	20.7	0
	10/19/2012	0.0	0.0	0.5	20.4	0
	12/28/2012	0.0	0.0	0.1	20.6	0
	1/3/2013	0.0	0.0	0.4	20.6	0
	1/10/2013	0.0	0.0	0.0	20.5	0
	1/17/2013	0.0	0.0	0.0	20.4	0
	2/28/2013	0.0	0.0	0.5	21.6	0
	3/27/2013	0.0	0.0	0.2	21.9	0
	4/25/2013	0.0	0.0	0.1	20.6	0

TABLE 1

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	5/29/2013	0.0	0.0	0.2	21.8	0
	6/27/2013	0.0	0.0	0.9	18.7	0
	7/25/2013	0.0	0.0	1.4	19.3	0
	8/29/2013	0.0	0.0	1.2	19.5	0
	9/25/2013	0.0	0.0	0.7	20.1	0
	11/27/2013	0.0	0.0	0.7	20.6	0
	12/17/2013	0.0	0.0	0.6	20.6	0
	12/23/2013	0.0	0.0	0.5	21.2	0
	1/29/2014	0.0	0.0	0.5	19.7	0
	2/25/2014	0.0	0.0	0.7	20.5	0
	3/27/2014	0.0	0.0	0.1	20.7	0
	4/24/2014	0.0	0.0	0.3	20.7	0
	6/26/2014	0.0	0.0	1.6	18.3	0
	6/30/2014	0.08	0.0	1.6	20.0	0
	7/1/2014	0.0	0.0	1.9	18.6	0
	7/2/2014	0.01	0.0	1.8	18.8	0
	7/3/2014	0.0	0.0	2.0	18.7	0
	9/24/2014	0.0	0.0	0.8	18.6	0
	12/12/2014	0.0	0.0	0.4	20.4	0
	1/30/2015	0.0	0.0	0.3	21.6	0
	2/24/2015	0.0	0.0	0.6	20.6	0
	3/30/2015	0.0	0.0	0.5	20.6	0
SGP-15	9/24/2012	0.0	0.0	0.3	20.0	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.0	19.9	0
	9/27/2012	0.0	0.0	0.0	20.2	0
	9/28/2012	0.0	0.0	0.6	20.1	0
	10/1/2012	0.0	0.0	0.0	20.2	0
	10/2/2012	0.0	0.0	0.0	20.1	0
	10/3/2012	0.0	0.0	0.0	19.6	0
	10/4/2012	0.0	0.0	0.9	19.2	0
	10/5/2012	0.0	0.0	0.0	19.9	0
	10/12/2012	0.0	0.0	0.0	20.1	0
	10/19/2012	0.0	0.0	0.0	19.8	0
	12/28/2012	0.0	0.0	0.3	20.5	0
	1/3/2013	0.0	0.0	0.3	20.5	0
	1/10/2013	0.0	0.0	0.4	20.4	0
	1/17/2013	0.0	0.0	0.0	20.5	0
	2/28/2013	0.0	0.0	0.2	21.6	0
	3/27/2013	0.0	0.0	0.2	21.8	0
	4/25/2013	0.0	0.0	0.1	20.7	0
	5/29/2013	0.0	0.0	0.2	21.9	0
	6/27/2013	(6)	(6)	(6)	(6)	(6)
	7/25/2013	0.0	0.0	1.7	19.1	0
	8/29/2013	0.0	0.0	1.5	19.3	0
	9/25/2013	0.0	0.0	0.6	20.5	0
	11/27/2013	0.0	0.0	1.5	19.7	0
	12/17/2013	0.0	0.0	1.1	20.2	0
	12/23/2013	0.0	0.0	0.3	20.9	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-16	1/29/2014	0.0	0.0	0.2	19.8	0
	2/25/2014	0.0	0.0	0.3	20.7	0
	3/27/2014	0.0	0.0	0.1	20.8	0
	4/24/2014	0.0	0.0	0.4	20.8	0
	6/26/2014	0.0	0.0	1.8	18.4	0
	6/30/2014	0.03	0.0	1.7	19.8	0
	7/1/2014	0.0	0.0	1.9	18.6	0
	7/2/2014	0.0	0.0	1.9	18.9	0
	7/3/2014	0.0	0.0	1.9	18.7	0
	9/24/2014	0.0	0.0	0.9	18.9	0
	12/12/2014	0.0	0.0	0.8	20.7	0
	1/30/2015	0.0	0.0	0.6	22.7	0
	2/24/2015	0.0	0.0	1.2	20.4	0
	3/30/2015	0.0	0.0	0.7	20.4	0
	1/17/2013	0.0	0.0	0.0	19.9	0
	2/28/2013	0.0	0.0	0.4	21.3	0
	3/27/2013	0.0	0.0	0.3	21.7	0
	4/25/2013	0.0	0.0	0.1	20.6	0
	5/29/2013	0.0	0.0	0.3	21.8	0
	6/27/2013	(6)	(6)	(6)	(6)	(6)
	7/25/2013	(6)	(6)	(6)	(6)	(6)
	8/29/2013	(6)	(6)	(6)	(6)	(6)
	9/25/2013	0.0	0.0	1.1	20.1	0
	11/27/2013	0.0	0.0	0.9	20.2	0
	12/17/2013	0.0	0.0	0.8	20.3	0
	12/23/2013	0.0	0.0	0.8	21.5	0
	1/29/2014	0.0	0.0	0.7	19.3	0
	2/25/2014	0.0	0.0	1.1	20.1	0
	3/27/2014	0.0	0.0	0.0	20.9	0
	4/24/2014	0.0	0.0	0.6	20.6	0
	6/26/2014	0.0	0.0	0.0	20.4	0
	6/30/2014	0.03	0.0	2.2	19.1	0
	7/1/2014	0.0	0.0	2.6	17.7	0
	7/2/2014	0.01	0.0	2.5	18.2	0
	7/3/2014	0.0	0.0	2.5	18.2	0
	9/24/2014	0.0	0.0	0.7	18.7	0
	12/12/2014	0.0	0.0	0.6	21.0	0
	1/30/2015	0.0	0.0	0.7	23.4	0
	2/24/2015	0.0	0.0	1.0	20.3	0
	3/30/2015	0.0	0.0	0.6	20.7	0
SGP-27S	9/24/2012	0.0	0.0	0.7	19.7	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.0	20.1	0
	9/27/2012	0.0	0.0	0.7	19.8	0
	9/28/2012	0.0	0.0	0.6	19.6	0
	10/1/2012	0.0	0.0	0.6	20.1	0
	10/2/2012	0.0	0.0	0.6	19.9	0
	10/3/2012	0.0	0.0	0.8	19.8	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	10/4/2012	0.0	0.0	0.8	19.2	0
	10/5/2012	0.0	0.0	1.0	19.6	0
	10/12/2012	0.0	0.0	0.7	20.0	0
	10/19/2012	0.0	0.0	0.8	19.9	0
	12/28/2012	0.0	0.0	0.2	21.1	0
	1/3/2013	(4)	(4)	(4)	(4)	(4)
	1/10/2013	0.0	0.2	0.0	20.0	0
	1/17/2013	0.0	0.0	0.0	20.3	0
	2/28/2013	0.0	0.0	0.2	21.7	0
	3/27/2013	0.0	0.0	0.2	21.8	0
	4/25/2013	0.0	0.0	0.1	20.4	0
	5/29/2013	0.0	0.0	0.7	20.3	0
	6/27/2013	0.0	0.0	0.7	18.8	0
	7/25/2013	0.0	0.0	1.2	19.6	0
	8/29/2013	0.0	0.0	1.0	19.7	0
	9/25/2013	0.0	0.0	0.3	20.3	0
	11/27/2013	0.0	0.0	0.2	20.7	0
	12/17/2013	0.0	0.0	0.1	20.4	0
	12/23/2013	0.0	0.0	0.1	21.6	0
	1/29/2014	0.0	0.0	0.7	19.7	0
	2/25/2014	0.0	0.0	0.9	20.8	0
	3/27/2014	0.0	0.0	0.3	20.9	0
	4/24/2014	0.0	0.0	0.6	20.6	0
	4/30/2014	0.0	0.0	0.9	20.1	nm
	5/1/2014	0.0	0.0	0.9	21.0	0
	5/2/2014	-0.01	0.0	0.7	20.6	0
	5/3/2014	0.0	0.1	0.7	20.5	0
	5/4/2014	0.0	0.0	0.6	20.1	0
	5/5/2014	0.0	0.0	0.6	19.9	0
	5/6/2014	0.0	0.0	0.7	20.5	0
	5/7/2014	0.0	0.0	0.6	20.1	0
	5/8/2014	0.0	0.0	0.5	19.8	0
	5/9/2014	0.0	0.0	0.5	20.0	0
	5/12/2014	0.0	0.0	0.0	20.5	0
	5/13/2014	0.0	0.0	0.8	20.0	0
	5/14/2014	0.0	0.0	0.8	20.0	0
	5/15/2014	0.30	0.0	0.9	20.4	nm
	5/16/2014	0.0	0.0	0.9	20.0	nm
	5/19/2014	0.0	0.0	0.9	19.8	0
	5/27/2014	0.0	0.0	1.0	20.7	0
	6/4/2014	0.0	0.0	1.2	20.2	0
	6/12/2014	0.01	0.0	1.0	19.7	0
	6/19/2014	0.0	0.0	1.0	19.1	0
	6/26/2014	0.0	0.0	1.3	18.1	0
	6/30/2014	0.08	0.0	1.3	19.4	0
	7/1/2014	0.0	0.0	1.7	18.8	0
	7/2/2014	0.0	0.0	1.5	19.8	0
	7/3/2014	0.0	0.0	1.6	19.3	0
	7/7/2014	0.0	0.0	1.5	19.4	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure (in H ₂ O)	Gas Quality/Combustible Gas Concentrations			
			Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
SGP-27D	7/18/2014	0.0	0.0	1.1	19.6	0
	7/24/2014	0.0	0.0	0.4	20.1	0
	7/31/2014	0.0	0.0	1.1	19.9	0
	9/24/2014	0.0	0.0	0.5	19.1	0
	12/12/2014	0.0	0.0	0.6	21.7	0
	1/30/2015	0.0	0.0	0.8	20.8	0
	2/24/2015	0.0	0.0	1.3	19.7	0.0
	3/30/2015	0.0	0.0	0.8	20.8	0.0
	9/24/2012	0.0	0.0	0.7	19.8	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.9	19.5	0
	9/27/2012	0.0	0.0	0.9	19.7	0
	9/28/2012	0.0	0.0	0.8	19.4	0
	10/1/2012	0.0	0.0	0.9	19.6	0
	10/2/2012	0.0	0.0	0.8	19.7	0
	10/3/2012	0.0	0.0	0.9	19.7	0
	10/4/2012	0.0	0.0	1.1	18.8	0
	10/5/2012	0.0	0.0	1.0	19.8	0
	10/12/2012	0.0	0.0	0.9	19.8	0
	10/19/2012	0.0	0.0	1.0	19.8	0
	12/28/2012	0.0	0.0	0.2	21.0	0
	1/3/2013	0.0	0.0	0.5	20.4	0
	1/10/2013	0.0	0.0	0.2	19.6	0
	1/17/2013	0.0	0.2	0.0	20.3	0
	2/28/2013	0.0	0.0	0.3	21.7	0
	3/27/2013	0.0	0.0	0.6	21.5	0
	4/25/2013	0.0	0.0	0.7	20.0	0
	5/29/2013	0.0	0.0	0.1	21.0	0
	6/27/2013	0.0	0.0	0.8	18.9	0
	7/25/2013	0.0	0.0	1.5	19.2	0
	8/29/2013	0.0	0.0	0.8	19.1	0
	9/25/2013	0.0	0.0	0.9	20.1	0
	11/27/2013	0.0	0.0	1.0	20.1	0
	12/17/2013	0.0	0.0	0.8	20.0	0
	12/23/2013	0.1	0.0	0.7	21.1	0
	1/29/2014	0.0	0.0	0.7	20.3	0
	2/25/2014	0.01	0.0	0.9	20.9	0
	3/27/2014	0.0	0.0	0.4	20.8	0
	4/24/2014	0.0	0.0	0.5	20.7	0
	4/30/2014	0.0	0.0	0.9	20.3	nm
	5/1/2014	0.0	0.0	0.9	21.0	0
	5/2/2014	-0.01	0.0	0.7	20.8	0
	5/3/2014	0.0	0.1	0.8	20.5	0
	5/4/2014	0.0	0.0	0.7	20.0	0
	5/5/2014	0.0	0.0	0.7	19.8	0
	5/6/2014	0.0	0.0	0.7	20.5	0
	5/7/2014	0.0	0.0	0.7	19.9	0
	5/8/2014	0.0	0.0	0.4	19.9	0
	5/9/2014	0.0	0.0	0.6	19.9	0

SOIL GAS MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Location	Date	Pressure	Gas Quality/Combustible Gas Concentrations			
		(in H ₂ O)	Methane % ¹	CO ₂ % ¹	O ₂ % ¹	H ₂ S ppm
	5/12/2014	0.0	0.0	0.6	20.7	0
	5/13/2014	0.0	0.0	0.7	20.2	0
	5/14/2014	0.0	0.0	0.7	20.2	0
	5/15/2014	0.32	0.0	0.8	20.4	nm
	5/16/2014	0.0	0.0	0.8	20.3	nm
	5/19/2014	0.0	0.0	0.9	19.8	0
	5/27/2014	0.0	0.0	1.0	19.6	0
	6/4/2014	0.0	0.0	1.3	20.1	0
	6/12/2014	0.01	0.0	1.1	19.9	0
	6/19/2014	0.0	0.0	1.1	19.2	0
	6/26/2014	0.0	0.0	1.1	18.3	0
	6/30/2014	0.08	0.0	1.3	19.4	0
	7/1/2014	0.0	0.0	1.7	18.8	0
	7/2/2014	0.0	0.0	1.5	19.6	0
	7/3/2014	0.0	0.0	1.6	19.3	0
	7/7/2014	0.0	0.0	1.6	19.3	0
	7/18/2014	0.0	0.0	1.2	19.6	0
	7/24/2014	0.0	0.0	0.5	20.0	0
	7/31/2014	0.0	0.0	1.2	19.8	0
	9/24/2014	0.0	0.0	0.7	18.8	0
	12/12/2014	0.0	0.0	0.6	21.9	0
	1/30/2015	0.0	0.0	1.3	19.2	0
	2/24/2015	0.0	0.0	1.2	19.8	0.0
	3/30/2015	0.0	0.0	0.9	20.7	0.0

Notes:

1- Percent by volume

2- Valve opened for 30 minutes and closed prior to reading

3- Valves at SGP107, SGP110 and SGP114 were left open overnight on October 1, 2012

4- Broken valve; no monitoring at this location on this date

5- There was a pump error at the time of measurement

6- Soil gas probes were not accessible during the monitoring event

nm- not monitored or not monitored due to presence of water in vacuum tube leading to instrument pump shut off

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ft/min)			Gas Quality/Combustible Gas Concentrations			
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
9/21/2012	3Q12	PVT 1	76	55	54	0.0	0.5	20.3	0.0
12/28/2012	4Q12		52	22	82	0.0	0.0	20.2	0.0
3/27/2013	1Q13		118	122	116	0.0	0.3	21.8	0.0
6/27/2013	2Q13		67	71	80	0.0	0.8	19.5	0.0
9/25/2013	3Q13		62	90	41	0.0	0.6	20.8	0.0
12/23/2013	4Q13		28	25	36	0.0	0.2	20.5	0.0
3/27/2014	1Q14		28	17	83	0.0	0.1	20.9	0.0
6/26/2014	2Q14		16	6	5	0.0	1.7	18.6	0.0
7/1/2014	3Q14		44	75	70	0.0	0.4	20.6	0.0
7/8/2014	3Q14		47	43	46	0.0	0.0	20.8	0.0
9/24/2014	3Q14		28	27	26	0.0	0.7	19.6	0.0
12/12/2014	4Q14		50	100	37	0.0	0.6	10.9	0.0
1/30/2015	Monthly		100	125	65	0.0	0.1	18.6	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		281	223	158	1.0	6.0	15.0	0.0
9/21/2012	3Q12	PVT 2	54	54	53	0.0	0.1	20.6	0.0
12/28/2012	4Q12		72	69	62	0.0	0.0	20.4	0.0
3/27/2013	1Q13		133	150	146	0.0	0.2	22.1	0.0
6/27/2013	2Q13		40	37	41	0.0	0.6	19.3	0.0
9/25/2013	3Q13		20	38	42	0.0	0.1	21.0	0.0
12/23/2013	4Q13		50	68	65	0.0	0.1	19.3	0.0
3/27/2014	1Q14		78	98	111	0.0	0.2	20.7	0.0
6/26/2014	2Q14		2	2	2	0.0	1.7	18.8	0.0
7/1/2014	3Q14		40	64	70	0.0	0.5	20.4	0.0
7/8/2014	3Q14		92	158	61	0.0	0.5	20.4	0.0
7/31/2014	3Q14		-	-	-	-	-	-	-
8/6/2014	3Q14		25	20	13	0.0	1.3	18.9	0.0
8/13/2014	3Q14		43	96	70	0.0	0.7	20	0.0
8/20/2014	3Q14		31	21	28	0.0	0.4	20.9	0.0
8/29/2014	3Q14		81	82	40	0.0	1.0	19.9	0.0
9/4/2014	3Q14		20	28	29	0.0	0.2	20.1	0.0
9/11/2014	3Q14		57	53	102	0.0	0.0	19.5	0.0
9/24/2014	3Q14		35	26	28	0.0	0.7	19.9	0.0
12/12/2014	4Q14		77	120	57	0.0	0.2	21.4	0.0
1/30/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		131	188	148	0.0	0.2	20.2	0.0
9/21/2012	3Q12	PVT 3	70	83	89	0.0	0.0	20.4	0.0
12/28/2012	4Q12		77	69	39	0.0	0.0	20.6	0.0
3/27/2013	1Q13		256	250	280	0.0	0.2	22.1	0.0
6/27/2013	2Q13		32	38	40	0.0	0.3	19.7	0.0
9/25/2013	3Q13		51	72	69	0.0	0.2	20.7	0.0
12/23/2013	4Q13		53	47	15	0.0	0.1	21.8	0.0
3/27/2014	1Q14		85	84	130	0.0	0.0	20.9	0.0
6/26/2014	2Q14		4	3	3	0.0	1.6	18.1	0.0
7/1/2014	3Q14		55	48	60	0.0	0.2	20.3	0.0
7/8/2014	3Q14		110	190	131	0.0	0.2	20.6	0.0
9/24/2014	3Q14		32	30	32	0.0	0.3	19.9	0.0

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

TABLE 2

Date	Event	Location	Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
12/12/2014	4Q14		56	55	68	0.0	0.1	21.6	0.0
1/30/2015	Monthly		92	70	48	0.0	0.1	16.9	0.0
2/24/2015	Monthly		(4)	(4)	(4)	0.0	(4)	(4)	0.0
3/30/2015	Monthly		251	311	205	0.0	0.1	19.8	0.0
9/21/2012	3Q12	PVT 4	82	91	93	0.0	0.1	20.6	0.0
12/28/2012	4Q12		90	116	29	0.0	0.0	20.7	0.0
3/27/2013	1Q13		156	144	136	0.0	0.2	22.0	0.0
6/27/2013	2Q13		53	58	55	0.0	0.0	20.1	0.0
9/25/2013	3Q13		10	32	27	0.0	0.1	20.5	0.0
12/23/2013	4Q13		110	130	108	0.0	0.1	22.1	0.0
3/27/2014	1Q14		93	240	169	0.0	0.1	20.6	0.0
6/26/2014	2Q14		3	2	1	0.0	3.1	16.0	0.0
7/1/2014	3Q14		25	32	44	0.0	0.0	20.3	0.0
7/8/2014	3Q14		53	67	61	0.0	0.1	20.7	0.0
9/24/2014	3Q14		19	30	22	0.0	0.1	19.7	0.0
12/12/2014	4Q14		33	44	51	0.0	0.1	21.5	0.0
1/30/2015	Monthly		154	196	163	0.0	0.1	17.4	0.0
2/24/2015	Monthly		(4)	(4)	(4)	0.0	(4)	(4)	0.0
3/30/2015	Monthly		182	200	199	0.0	0.1	19.7	0.0
9/21/2012	3Q12	PVT 5	78	77	75	0.0	0.6	20.0	0.0
12/28/2012	4Q12		63	63	64	0.0	0.0	20.9	0.0
3/27/2013	1Q13		163	182	179	0.0	0.2	22.0	0.0
6/27/2013	2Q13		22	18	20	0.0	0.4	19.5	0.0
9/25/2013	3Q13		65	89	54	0.0	0.3	20.3	0.0
12/23/2013	4Q13		69	40	49	0.0	0.2	22.5	0.0
3/27/2014	1Q14		58	110	129	0.0	0.0	20.9	0.0
6/26/2014	2Q14		35	20	26	0.0	1.3	18.5	0.0
7/1/2014	3Q14		30	50	120	0.0	0.1	19.8	0.0
7/8/2014	3Q14		90	102	64	0.0	0.0	20.7	0.0
9/24/2014	3Q14		29	51	41	0.0	0.1	20.0	0.0
12/12/2014	4Q14		31	40	84	0.0	0.1	21.6	0.0
1/30/2015	Monthly		(4)	(4)	(4)	0.0	(4)	(4)	0.0
2/24/2015	Monthly		(4)	(4)	(4)	0.0	(4)	(4)	0.0
3/30/2015	Monthly		88	164	165	0.0	0.0	19.5	0.0
9/21/2012	3Q12	PVT 6	75	71	71	0.0	0.5	20.3	0.0
12/28/2012	4Q12		45	43	32	0.1	0.1	21.0	0.0
3/27/2013	1Q13		142	156	163	0.0	0.2	22.1	0.0
6/27/2013	2Q13		--	--	--	--	--	--	0.0
9/25/2013	3Q13		29	29	8	0.0	0.1	20.5	0.0
12/23/2013	4Q13		--	--	--	--	--	--	0.0
3/27/2014	1Q14		66	74	106	0.0	0.0	20.4	0.0
6/26/2014	2Q14		--	--	--	0.0	4.7	13.2	0.0
7/1/2014	3Q14		--	--	--	--	--	--	0.0
7/8/2014	3Q14		59	117	52	0.0	0.3	20.3	0.0
9/24/2014	3Q14		32	15	19	0.0	0.2	19.8	0.0
12/12/2014	4Q14		20	63	60	0.0	0.1	21.5	0.0
1/30/2015	Monthly		(4)	(4)	(4)	0.0	(4)	(4)	0.0

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA

HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ft/min)			Gas Quality/Combustible Gas Concentrations				
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²	
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)	
3/30/2015	Monthly		261	138	236	0.0	0.1	19.5	0.0	
9/21/2012	3Q12	PVT 7	57	57	56	0.0	1.2	19.7	0.0	
12/28/2012	4Q12		126	80	35	0.1	0.1	21.1	0.0	
3/27/2013	1Q13		124	118	132	0.0	0.2	22.1	0.0	
6/27/2013	2Q13		60	67	75	0.0	8.0	10.8	0.0	
9/25/2013	3Q13		30	31	10	0.0	1.8	19.0	0.0	
12/23/2013	4Q13		--	--	--	--	--	--	--	
3/27/2014	1Q14		92	158	238	0.0	0.0	21.1	0.0	
6/26/2014	2Q14		11	10	7	0.0	0.8	19.2	0.0	
7/1/2014	3Q14		60	50	65	0.0	0.8	18.9	0.0	
7/8/2014	3Q14		113	129	121	0.0	0.4	20.1	0.0	
9/24/2014	3Q14	48	44	34	0.0	2.5	17.6	0.0		
12/12/2014	4Q14	77	60	50	0.0	0.1	21.3	0.0		
1/30/2015	Monthly	117	170	160	0.0	0.2	17.5	0.0		
2/24/2015	Monthly	28	30	217	0.0	0.5	19.8	0.0		
3/30/2015	Monthly	467	115	147	0.0	0.0	21.0	0.0		
9/21/2012	3Q12	PVT 8	42	42	43	0.0	0.3	20.1	0.0	
12/28/2012	4Q12		99	102	43	0.0	0.1	21.3	0.0	
3/27/2013	1Q13		75	89	90	0.0	0.2	22.1	0.0	
6/27/2013	2Q13		60	54	45	0.0	0.5	19.1	0.0	
9/25/2013	3Q13		63	72	64	0.0	0.1	19.4	0.0	
12/23/2013	4Q13		30	37	31	0.0	1.8	20.9	0.0	
3/27/2014	1Q14		150	172	282	0.0	0.0	21.0	0.0	
6/26/2014	2Q14		21	9	21	0.0	0.8	19.0	0.0	
7/1/2014	3Q14		18	28	24	0.0	6.6	11.8	0.0	
7/8/2014	3Q14		68	115	151	0.0	4.8	14.1	0.0	
9/24/2014	3Q14	24	20	15	0.0	4.2	16.1	0.0		
12/12/2014	4Q14	97	91	62	0.0	0.7	20.7	0.0		
1/30/2015	Monthly	50	71	34	0.0	0.3	16.9	0.0		
2/24/2015	Monthly	(4)	(4)	(4)	(4)	(4)	(4)	(4)		
3/30/2015	Monthly	393	378	268	0.0	0.4	20.5	0.0		
9/21/2012	3Q12	PVT 9	46	46	48	0.0	1.8	19.0	0.0	
12/28/2012	4Q12		90	47	65	0.0	0.4	20.8	0.0	
3/27/2013	1Q13		58	73	85	0.0	0.1	22.1	0.0	
6/27/2013	2Q13		124	126	131	0.0	4.7	14.4	0.0	
9/25/2013	3Q13		29	31	21	0.0	1.1	19.9	0.0	
12/23/2013	4Q13		126	42	47	0.0	0.2	21.0	0.0	
3/27/2014	1Q14		38	109	119	0.0	0.0	20.9	0.0	
6/26/2014	2Q14		13	10	7	1.4	11.2	6.5	0.0	
7/1/2014	3Q14		40	43	5	0.3	12.2	6.0	0.0	
7/8/2014	3Q14		46	71	154	0.1	3.7	15.7	0.0	
9/24/2014	3Q14	31	44	22	0.0	1.8	18.5	0.0		
12/12/2014	4Q14	55	61	50	0.0	0.1	21.4	0.0		
1/30/2015	Monthly	99	74	93	0.0	0.2	18.5	0.0		
2/24/2015	Monthly	(4)	(4)	(4)	(4)	(4)	(4)	(4)		
3/30/2015	Monthly	508	439	236	0.0	0.2	21.0	0.0		

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ft/min)			Gas Quality/Combustible Gas Concentrations			
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
9/21/2012	3Q12	PVT 10	64	64	64	0.0	2.3	18.7	0.0
12/28/2012	4Q12		38	65	53	0.2	0.6	20.9	0.0
3/27/2013	1Q13		221	242	256	0.1	0.8	21.3	0.0
6/27/2013	2Q13		27	31	26	0.0	11.7	6.9	0.0
9/25/2013	3Q13		6	8	6	0.0	4.0	17.2	0.0
12/23/2013	4Q13		57	45	43	0.0	1.6	19.5	0.0
3/27/2014	1Q14		52	36	42	0.3	1.7	18.0	0.0
6/26/2014	2Q14		9	8	8	0.0	0.4	20.2	0.0
7/1/2014	3Q14		27	34	38	0.8	13.0	5.1	0.0
7/8/2014	3Q14		42	58	79	0.0	11.9	6.2	0.0
9/24/2014	3Q14		44	59	32	0.0	4.4	15.8	0.0
12/12/2014	4Q14		52	53	100	0.0	0.6	20.9	0.0
1/30/2015	Monthly		84	54	72	0.0	0.4	20.2	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		280	310	528	0.0	0.2	21.8	0.0
11/27/2013	Monthly	PVT 11	--	92	--	0.0	0.9	22.0	0.0
12/17/2013	Monthly		40	91	44	0.0	0.8	19.2	0.0
12/23/2013	Monthly		164	187	208	0.0	0.7	20.5	0.0
1/29/2014	Monthly		85	56	73	0.0	0.8	20.3	0.0
2/25/2014	Monthly		10	10	7	0.0	0.9	19.2	0.0
3/27/2014	Monthly		58	72	171	0.0	0.2	21.0	0.0
4/24/2014	Monthly		55	40	128	0.0	0.0	20.8	0.0
6/26/2014	2Q14		4	8	3	0.0	0.0	20.7	0.0
7/1/2014	3Q14		36	64	84	0.0	0.0	19.5	0.0
7/8/2014	3Q14		52	44	30	0.0	0.0	20.5	0.0
7/18/2014	3Q14		49	41	35	0.0	0.0	21.0	0.0
7/24/2014	3Q14		56	37	27	0.0	3.5	17.4	0.0
7/31/2014	3Q14		8	13	45	0.0	0.1	20.3	0.0
8/6/2014	3Q14		23	14	19	0.0	0.0	20.2	0.0
8/13/2014	3Q14		47	36	46	0.0	2.4	18.8	0.0
8/20/2014	3Q14		5	24	11	0.0	1.5	19.6	0.0
8/29/2014	3Q14		18	6	28	0.0	1.6	19.7	0.0
9/4/2014	3Q14		9	25	34	0.0	0.6	19.9	0.0
9/11/2014	3Q14		35	59	36	0.0	0.0	21.2	0.0
9/19/2014	3Q14		38	25	21	0.0	1.8	18.7	0.0
9/24/2014	3Q14		41	33	26	0.0	3.1	16.5	0.0
12/12/2014	4Q14		153	131	190	0.0	0.1	21.3	0.0
1/30/2015	Monthly		110	132	90	0.0	0.5	18.5	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		477	454	162	0.0	1.0	19.8	0.0
11/27/2013	Monthly	PVT 12	--	28	--	0.0	0.2	20.9	0.0
12/17/2013	Monthly		70	98	68	0.0	0.1	19.7	0.0
12/23/2013	Monthly		106	82	61	0.0	0.4	20.8	0.0
1/29/2014	Monthly		70	45	88	0.0	0.3	21.0	0.0
2/25/2014	Monthly		90	134	50	0.0	1.1	20.1	0.0

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ft/min)			Gas Quality/Combustible Gas Concentrations			
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
3/27/2014	Monthly		35	70	160	0.0	0.1	21.2	0.0
4/24/2014	Monthly		115	212	424	0.0	0.2	20.3	0.0
6/26/2014	2Q14		29	27	22	0.0	0.0	20.5	0.0
7/1/2014	3Q14		50	74	94	0.0	0.0	19.0	0.0
7/8/2014	3Q14		70	49	56	0.0	0.0	20.5	0.0
7/18/2014	3Q14		46	53	54	0.0	4.2	15.9	0.0
7/24/2014	3Q14		57	30	55	0.0	3.2	17.4	0.0
7/31/2014	3Q14		30	70	50	0.0	0.9	19.5	0.0
8/6/2014	3Q14		2	3	3	0.0	1.2	18.2	0.0
9/24/2014	3Q14		25	21	11	0.0	5.3	14.8	0.0
12/12/2014	4Q14		38	35	60	0.0	0.4	21.6	0.0
1/30/2015	Monthly		114	160	84	0.0	0.5	18.9	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		159	224	221	0.0	1.1	19.5	0.0
11/27/2013	Monthly	PVT 13	--	38	--	0.0	0.6	20.7	0.0
12/17/2013	Monthly		35	60	67	0.0	0.2	19.2	0.0
12/23/2013	Monthly		99	55	65	0.0	0.3	20.7	0.0
1/29/2014	Monthly		80	100	91	0.0	0.4	21.5	0.0
2/25/2014	Monthly		65	76	68	0.0	0.5	21.0	0.0
3/27/2014	Monthly		47	81	183	0.0	0.2	21.1	0.0
4/24/2014	Monthly		56	117	207	0.0	0.0	20.9	0.0
6/26/2014	2Q14		7	6	6	0.5	0.7	19.6	0.0
7/1/2014	3Q14		13	28	38	0.0	0.7	18.4	0.0
7/8/2014	3Q14		89	113	128	0.1	0.4	20.2	0.0
7/18/2014	3Q14		54	81	41	0.0	1.3	19.5	0.0
7/24/2014	3Q14		5	7	4	0.0	1.9	19.0	0.0
7/31/2014	3Q14		70	36	15	0.0	2.6	18.2	0.0
8/6/2014	3Q14		33	21	40	0.0	0.9	18.7	0.0
8/13/2014	3Q14		28	41	48	0.1	4.6	15.1	0.0
8/20/2014	3Q14		61	31	20	0.0	1.1	19.8	0.0
8/29/2014	3Q14		86	43	34	0.0	5.5	14.7	0.0
9/4/2014	3Q14		6	0	3	0.0	0.4	19.7	0.0
9/11/2014	3Q14		25	79	34	0.0	0.0	21.2	0.0
9/24/2014	3Q14		27	37	31	0.0	3.2	17.0	0.0
12/12/2014	4Q14		65	29	30	0.0	0.3	21.8	0.0
1/30/2015	Monthly		60	72	34	0.0	0.2	19.7	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		109	175	255	0.0	0.3	20.6	0.0
11/27/2013	Monthly	PVT 14	--	91	--	0.0	0.4	22.5	0.0
12/17/2013	Monthly		40	70	88	0.0	0.5	18.5	0.0
12/23/2013	Monthly		103	74	50	0.0	0.2	20.9	0.0
1/29/2014	Monthly		30	32	37	0.0	0.2	22.7	0.0
2/25/2014	Monthly		41	94	61	0.0	0.2	21.2	0.0
3/27/2014	Monthly		40	75	208	0.0	0.1	21.0	0.0
4/24/2014	Monthly		101	108	210	0.0	0.0	21.2	0.0
6/26/2014	2Q14		32	24	62	0.0	0.0	20.1	0.0

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ft/min)			Gas Quality/Combustible Gas Concentrations			
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
7/1/2014	3Q14		24	28	57	0.0	0.5	18.1	0.0
7/8/2014	3Q14		61	117	178	0.1	0.8	19.9	0.0
7/18/2014	3Q14		40	73	45	0.0	0.7	19.8	0.0
7/24/2014	3Q14		60	70	27	0.0	0.2	20.7	0.0
7/31/2014	3Q14		28	2	40	0.0	2.8	17.9	0.0
8/6/2014	3Q14		42	344	43	0.0	0.1	19.9	0.0
9/24/2014	3Q14		10	11	9	0.0	2.7	17.6	0.0
12/12/2014	4Q14		28	90	61	0.0	0.1	21.9	0.0
1/30/2015	Monthly		48	16	24	0.0	0.1	20.2	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		123	168	204	0.0	0.2	20.4	0.0
11/27/2013	Monthly	PVT 15	--	91	--	0.0	0.2	21.4	0.0
12/17/2013	Monthly		33	39	70	0.0	0.2	18.6	0.0
12/23/2013	Monthly		149	90	111	0.0	0.1	21.6	0.0
1/29/2014	Monthly		--	--	--	--	--	--	--
2/25/2014	Monthly		--	--	--	0.0	0.1	21.3	0.0
3/27/2014	Monthly		--	--	--	0.0	0.0	21.2	0.0
4/24/2014	Monthly		103	140	230	0.0	0.0	21.3	0.0
6/26/2014	2Q14		22	19	31	0.0	0.0	19.9	0.0
7/1/2014	3Q14		44	50	57	0.0	0.1	18.6	0.0
7/8/2014	3Q14		69	95	114	0.0	0.0	20.8	0.0
7/18/2014	3Q14		25	56	40	0.0	0.0	20.7	0.0
7/24/2014	3Q14		51	34	36	0.0	0.1	20.7	0.0
7/31/2014	3Q14		22	27	30	0.0	1.4	19.5	0.0
8/6/2014	3Q14		54	60	45	0.0	0.0	20.2	0.0
9/24/2014	3Q14		27	28	26	0.0	0.2	20.6	0.0
12/12/2014	4Q14		52	125	30	0.0	0.2	21.1	0.0
1/30/2015	Monthly		52	98	55	0.0	0.1	20.1	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		81	151	86	0.0	0.1	20.6	0.0
11/27/2013	Monthly	PVT 16	--	63	--	0.0	0.3	21.1	0.0
12/17/2013	Monthly		160	156	81	0.0	0.2	17.9	0.0
12/23/2013	Monthly		60	56	30	0.0	0.1	21.9	0.0
1/29/2014	Monthly		44	25	52	0.0	0.2	23.2	0.0
2/25/2014	Monthly		54	56	76	0.0	0.1	21.5	0.0
3/27/2014	Monthly		39	55	210	0.0	0.0	21.3	0.0
4/24/2014	Monthly		114	117	200	0.0	0.0	21.1	0.0
6/26/2014	2Q14		2	1	1	0.0	0.1	19.7	0.0
7/1/2014	3Q14		28	35	60	0.0	0.1	19.2	0.0
7/8/2014	3Q14		45	42	65	0.0	0.0	20.8	0.0
7/18/2014	3Q14		30	43	56	0.0	0.7	19.6	0.0
7/24/2014	3Q14		42	34	46	0.0	0.3	20.3	0.0
7/31/2014	3Q14		40	75	93	0.0	0.7	20.1	0.0
8/6/2014	3Q14		40	70	64	0.0	0.0	20.1	0.0
9/24/2014	3Q14		22	15	10	0.0	0.8	19.9	0.0
12/12/2014	4Q14		111	123	80	0.0	0.1	20.8	0.0

TABLE 2

Page 7 of 10

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ff/min)			Gas Quality/Combustible Gas Concentrations					
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²		
1/30/2015	Monthly	PVT 17	135	75	60	0.0	0.3	20.3	0.0		
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)		
3/30/2015	Monthly		452	392	197	0.0	0.1	20.2	0.0		
11/27/2013	Monthly		--	43	--	0.0	0.3	21.8	0.0		
12/17/2013	Monthly		44	76	70	0.0	0.2	17.9	0.0		
12/23/2013	Monthly		78	46	31	0.0	0.2	21.7	0.0		
1/29/2014	Monthly		33	80	135	0.0	0.0	21.4	0.0		
2/25/2014	Monthly		71	73	77	0.0	0.3	21.2	0.0		
3/27/2014	Monthly		64	110	151	0.0	0.0	21.1	0.0		
4/24/2014	Monthly		100	161	210	0.0	0.0	21.0	0.0		
6/26/2014	2Q14	PVT 18	1	1	1	0.0	0.0	20.0	0.0		
7/1/2014	3Q14		45	40	94	0.0	0.0	19.1	0.0		
7/8/2014	3Q14		108	120	118	0.0	0.3	20.4	0.0		
7/18/2014	3Q14		60	53	90	0.0	3.5	16.8	0.0		
7/24/2014	3Q14		124	126	55	0.0	1.4	19.4	0.0		
7/31/2014	3Q14		27	60	47	0.0	1.5	19.4	0.0		
8/6/2014	3Q14		56	88	116	0.0	0.9	18.4	0.0		
9/24/2014	3Q14		20	22	15	0.0	0.8	19.9	0.0		
12/12/2014	4Q14		131	150	95	0.0	0.1	20.9	0.0		
1/30/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)		
2/24/2015	Monthly	PVT 19	(4)	(4)	(4)	(4)	(4)	(4)	(4)		
3/30/2015	Monthly		301	254	194	0.0	0.1	20.1	0.0		
11/27/2013	Monthly		--	151	--	0.0	0.4	19.8	0.0		
12/17/2013	Monthly		52	53	53	0.0	0.1	17.7	0.0		
12/23/2013	Monthly		74	125	159	0.0	0.3	20.1	0.0		
1/29/2014	Monthly		25	5	44	0.0	0.3	19.5	0.0		
2/25/2014	Monthly		--	--	--	0.0	0.4	21.1	0.0		
3/27/2014	Monthly		31	10	78	0.0	0.0	20.9	0.0		
4/24/2014	Monthly		70	117	130	0.0	0.0	21.3	0.0		
6/26/2014	2Q14		3	3	6	0.0	0.0	20.3	0.0		
7/1/2014	3Q14	PVT 18	13	15	40	0.0	1.1	16.7	0.0		
7/8/2014	3Q14		24	21	2	0.0	0.8	19.6	0.0		
7/18/2014	3Q14		43	56	40	0.1	3.0	17.1	0.0		
7/24/2014	3Q14		18	31	29	0.0	2.3	18.2	0.0		
7/31/2014	3Q14		68	37	50	0.0	7.9	12.5	0.0		
8/6/2014	3Q14		32	24	25	0.0	0.0	19.9	0.0		
9/24/2014	3Q14		51	57	52	0.7	12.9	5.2	0.0		
12/12/2014	4Q14		(3)	(3)	(3)	(3)	(3)	(3)	(3)		
1/30/2015	Monthly		160	161	108	0.0	0.1	19.5	0.0		
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)		
3/30/2015	Monthly		672	554	305	0.0	0.0	20.5	0.0		
11/27/2013	Monthly	PVT 19	--	18	--	0.4	1.8	19.0	0.0		
12/17/2013	Monthly		30	30	50	0.0	0.4	17.3	0.0		
12/23/2013	Monthly		87	78	28	0.0	0.1	20.4	0.0		
1/29/2014	Monthly		90	110	58	0.1	0.1	22.5	0.0		

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ft/min)			Gas Quality/Combustible Gas Concentrations			
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
2/25/2014	Monthly		--	--	--	0.0	0.9	20.4	0.0
3/27/2014	Monthly		55	33	71	0.0	0.0	20.4	0.0
4/24/2014	Monthly		38	30	54	0.0	0.0	20.9	0.0
6/26/2014	2Q14		19	6	31	0.0	0.0	18.6	0.0
7/1/2014	3Q14		21	7	24	0.0	0.0	19.1	0.0
7/8/2014	3Q14		9	7	10	0.0	0.1	20.7	0.0
7/18/2014	3Q14		10	22	18	0.0	0.0	21.0	0.0
7/24/2014	3Q14		27	75	48	0.0	0.3	20.3	0.0
7/31/2014	3Q14		38	25	55	0.0	2.5	18.0	0.0
8/6/2014	3Q14		19	34	50	0.0	0.0	20.0	0.0
8/13/2014	3Q14		4	33	44	0.0	6.1	14.7	0.0
8/20/2014	3Q14		16	19	32	0.0	9.0	10.0	0.0
8/29/2014	3Q14		2	2	3	0.2	6.7	12.8	0.0
9/4/2014	3Q14		83	57	30	1.3	6.3	13.2	0.0
9/11/2014	3Q14		48	67	32	0.0	0.0	21.4	0.0
9/24/2014	3Q14		21	26	16	0.6	14.2	4.0	0.0
12/12/2014	4Q14		35	26	35	0.0	0.7	20.2	0.0
1/30/2015	Monthly		31	81	70	0.0	0.1	19.3	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		151	133	214	0.0	0.1	20.3	0.0
11/27/2013	Monthly	PVT 20	--	63	--	0.0	0.2	20.8	0.0
12/17/2013	Monthly		85	150	148	0.0	1.3	16.4	0.0
12/23/2013	Monthly		50	9	13	0.0	1.0	19.5	0.0
1/29/2014	Monthly		6	6	26	0.0	1.1	21.5	0.0
2/25/2014	Monthly		--	--	--	0.0	0.8	21.2	0.0
3/27/2014	Monthly		50	24	53	0.0	0.0	20.7	0.0
4/24/2014	Monthly		54	45	73	0.0	0.0	20.8	0.0
6/26/2014	2Q14		8	7	10	0.0	0.0	20.3	0.0
7/1/2014	3Q14		18	8	30	0.0	0.0	19.0	0.0
7/8/2014	3Q14		7	6	20	0.0	0.2	20.5	0.0
7/18/2014	3Q14		23	24	26	0.1	2.4	18.0	0.0
7/24/2014	3Q14		50	31	29	0.0	3.2	16.4	0.0
7/31/2014	3Q14		38	29	21	0.0	6.5	13.9	0.0
8/6/2014	3Q14		14	26	50	0.0	1.4	18.4	0.0
8/13/2014	3Q14		29	38	39	0.0	0.0	20.7	0.0
8/20/2014	3Q14		26	5	21	0.0	1.9	18.2	0.0
8/29/2014	3Q14		2	3	5	0.0	6.1	15.0	0.0
9/4/2014	3Q14		3	31	32	0.6	13.4	7.0	0.0
9/11/2014	3Q14		69	37	82	1.5	1.7	19.4	0.0
9/19/2014	3Q14		22	13	12	0.0	0.0	21.9	0.0
9/24/2014	3Q14		51	56	49	0.0	13.2	5.4	0.0
12/12/2014	4Q14		(3)	(3)	(3)	(3)	(3)	(3)	(3)
1/30/2015	Monthly		85	83	74	0.0	0.3	20.4	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		90	128	94	0.0	0.2	20.1	0.0
11/27/2013	Monthly	PVT 21	--	35	--	0.0	0.7	20.1	0.0

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA

HIMCO SITE

ELKHART, INDIANA

Date	Event	Location	Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
12/17/2013	Monthly		25	27	35	0.0	0.1	20.3	0.0
12/23/2013	Monthly		152	76	31	0.0	0.1	20.4	0.0
1/29/2014	Monthly		12	1	75	0.0	1.9	20.3	0.0
2/25/2014	Monthly		--	--	--	0.0	1.1	20.8	0.0
3/27/2014	Monthly		15	21	17	0.0	0.0	20.6	0.0
4/24/2014	Monthly		50	54	221	0.0	0.1	20.8	0.0
6/26/2014	2Q14		24	6	6	0.1	0.0	20.3	0.0
7/1/2014	3Q14		9	28	40	0.0	0.3	18.5	0.0
7/8/2014	3Q14		0	3	19	0.0	0.3	20.4	0.0
7/18/2014	3Q14		52	32	58	0.0	4.0	16.1	0.0
7/24/2014	3Q14		3	0	3	0.0	4.1	15.8	0.0
7/31/2014	3Q14		4	9	8	0.0	9.3	11.1	0.0
8/6/2014	3Q14		1	24	16	0.0	3.4	16.3	0.0
9/24/2014	3Q14		51	59	44	0.0	4.4	16.1	0.0
12/12/2014	4Q14		2	28	50	0.1	1.2	19.5	0.0
1/30/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		82	92	216	0.0	0.2	20.3	0.0
1/30/2015	Monthly	PVT23	39	40	30	0.0	0.1	20.2	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		46	75	60	0.0	0.3	20.2	0.0
1/30/2015	Monthly	PVT22	62	41	85	0.0	0.1	20.1	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		150	112	249	0.3	2.1	18.4	0.0
1/30/2015	Monthly	PVT24	31	50	43	0.0	1.2	17.4	0.0
2/24/2015	Monthly		24	31	6	0.0	2.7	17.0	0.0
3/30/2015	Monthly		70	64	84	0.0	0.1	19.0	0.0
1/30/2015	Monthly	PVT25	92	78	75	0.0	2.1	17.2	0.0
2/24/2015	Monthly		60	94	115	0.3	1.6	18.9	0.0
1/30/2015	Monthly	PVT26	56	36	84	0.0	0.1	20.3	0.0
2/24/2015	Monthly		110	106	135	0.0	0.7	20.6	0.0
3/30/2015	Monthly		124	229	129	0.0	0.4	20.5	0.0
1/30/2015	Monthly	PVT27	66	60	75	0.0	0.1	22.7	0.0
2/24/2015	Monthly		85	111	170	0.0	0.2	20.7	0.0
3/30/2015	Monthly		90	99	88	0.0	0.4	20.5	0.0
1/30/2015	Monthly	PVT28	28	20	25	0.0	0.1	21.9	0.0
2/24/2015	Monthly		120	100	145	0.0	0.1	20.6	0.0
3/30/2015	Monthly		40	59	54	0.0	0.1	21.0	0.0
1/30/2015	Monthly	PVT29	56	36	84	0.0	0.1	20.3	0.0

TABLE 2

PASSIVE VENTILATION TRENCH MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Date	Event	Location	Velocity (ft/min)			Gas Quality/Combustible Gas Concentrations			
			Front	Middle	Back	Methane % ¹	CO2 % ¹	O2 % ¹	H2S PPM ²
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		561	510	262	0.0	0.6	20.6	0.0
1/30/2015	Monthly	PVT30	128	145	110	0.0	0.8	19.2	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		192	162	101	0.0	0.4	20.9	0.0
1/30/2015	Monthly	PVT31	233	190	96	0.0	0.3	21.1	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		521	129	100	0.0	0.0	20.6	0.0
1/30/2015	Monthly	PVT32	215	228	245	0.0	0.1	20.6	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		242	206	285	0.0	0.1	20.1	0.0
1/30/2015	Monthly	PVT33	419	366	250	0.0	0.1	19.6	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		509	415	399	0.0	0.0	20.7	0.0
1/30/2015	Monthly	PVT34	150	128	121	0.0	0.1	20.0	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		1118	807	409	0.0	0.0	20.5	0.0
1/30/2015	Monthly	PVT35	270	142	261	0.0	0.1	20.6	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		1022	935	737	0.0	0.0	20.5	0.0
1/30/2015	Monthly	PVT36	206	230	220	0.0	0.1	20.3	0.0
2/24/2015	Monthly		(4)	(4)	(4)	(4)	(4)	(4)	(4)
3/30/2015	Monthly		271	156	122	0.0	0.0	20.5	0.0

Notes:

1- Percent by volume

2- parts per million

(3) - Remedial construction activities impeded access at time of monitoring

(4) - No access due to presence of ice

(5) - Not measured; cap frozen

-- No reading/Not monitored

Attachment 1

Faegre Baker Daniels Correspondence

Attachment 2

Statistical Evaluation of Groundwater Monitoring Data

(See attached CD)